

State of Rhode Island and Providence Plantations



Prehospital Care Protocols and Standing Orders

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
D E P A R T M E N T O F H E A L T H



Safe and Healthy Lives in Safe and Healthy Communities

State of Rhode Island and Providence Plantations
Department of Health, Division of Emergency Medical Services

These protocols and standing orders are established by the Division of Emergency Medical Services of the Rhode Island Department of Health, and the Rhode Island Ambulance Service Advisory Board, pursuant to the authority conferred under sections 23-4.1-4 and 23-17.6-4 of the Rhode Island General Laws.

These protocols and standing orders shall supersede all protocols and standing orders previously established and promulgated by the Division of Emergency Medical Services of the Rhode Island Department of Health or the Rhode Island Ambulance Service Coordinating Board.

C. protocols effective January 31, 2004.

A handwritten signature in black ink, reading "Kenneth A. Williams".

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Instructions for Use of the Protocols

• Levels of care

Except as specifically indicated, each protocol represents the standard of care that applies to **all EMTs**. In general, each protocol begins with **basic** assessment and treatment measures required of **all levels** of prehospital personnel. In addition, there may be **advanced** care practices specified for “**ALS personnel**”. A *double-bordered box* surrounds measures specific to the practice of an EMT-C or an EMT-P, as shown in the example below:

▼ ALS PERSONNEL	
7. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the <i>RI EMS Ambulance Run Report</i> .	<i>Monitor ECG</i>

Although most of the standards are intended for all EMTs, some entire protocols apply exclusively to ALS personnel. These are indicated by a title that includes [ALS]. In addition, a few measures are specific to the practice of EMT-Ps. Such practices are indicated by “**EMT-Ps only**”, as shown in the example below:

7. EMT-Ps only. Consider transcutaneous pacing, if available.	<i>(External Pacing)</i>
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• Consent

A patient has the right to decide whether to consent to care or to refuse care. Under ordinary circumstances, the health care provider will inform the patient of the need for recommended care, and the possible risks to health if care is not provided. This enables the patient to make an informed decision to consent to, or to refuse, the recommended care. However, when EMTs recognize that a life-threatening medical emergency exists, they ordinarily start to treat the patient immediately, unless the patient actually refuses care. This “implied consent” permits prompt care to be delivered, without the time-consuming discussion required for the patient to make an informed decision.

Therefore, the first steps of the protocol for *Standard Management of All Patients* direct the EMT to secure a safe scene and “perform a primary survey, to identify and treat life-threatening problems”, without requiring the EMT to obtain the patient’s informed consent. For life-threatening emergencies, this directive applies to all patients. Further steps in the protocol direct the EMT to perform specified assessments, and to provide care following the protocols. With the exception of life-threatening emergencies, the protocols also direct the EMT to obtain valid consent (through contact with a parent or Medical Control) for further prehospital care and transportation of patients less than sixteen years of age.

• Care of Pediatric Patients

Throughout these protocols, whenever the care of **pediatric patients** differs from the care of adults (or requires special attention), the steps specific to pediatric management are identified by the national EMS for Children (EMS-C) logo and surrounded by a *box*, as shown in the example below. There are also a few protocols that apply only to pediatric patients. These are indicated by a title that includes the EMS-C logo and (Pediatric).

	9.3.2	Pediatric patients <5 feet tall (<35 kg/75 lbs): shock at 4 joules/kg (~2 joules/lb).	4 joules/kg

• Combining Protocols

There are many occasions when care must be guided by more than one protocol. EMTs are expected to use common sense and reasonable judgement to apply more than one protocol in the care of a patient, and to begin at an appropriate step when switching among protocols or utilizing more than one.

• Medical Control

All patient care protocols require EMTs to “contact medical control” during prehospital care. Unless the communication is a routine pre-arrival **notification**, direct voice contact between the EMT and physician is required. In the rare circumstance in which direct access to a physician is not feasible, communication may be relayed *through a licensed health care professional*.

In addition to the standing orders for EMTs, many protocols provide suggested treatment measures that the Medical Control physician may choose to order. EMTs are expected to provide further care consistent with the verbal orders issued by the Medical Control physician, including treatment, medications, or dosages that differ from the measures suggested in the protocols. As always, EMTs are expected to provide care that is permitted by their education, training, and scope of practice, and to use common sense and reasonable judgement in following Medical Control direction.

• Quick Reference notes

Along the right edge of many protocols is a **Quick Reference** column. The brief notes in this area are intended to provide a rapid reminder for the field EMT, or a studying aid for those who are learning the protocols. Refer to the example below:

TREATMENT	Quick Reference
1. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.	<i>Physical Exam & Vital Signs</i>

Standard Management Of All Patients

1. Secure the scene and ensure that it is safe. Non-latex gloves and proper size N95 mask (or better) are required for assessment and care of all patients with possible infectious disease.
 - 1.1 Determine the number of patients/potential patients.
 - 1.1.1 Determine whether the *Comfort One* protocol applies.
 - 1.1.2 Determine whether the *Biological Death* protocol applies.
 - 1.1.3 A pediatric patient is one who is less than 16 years of age. Determine whether adult or pediatric protocols and standards apply.
 - 1.2 Consider mechanism(s) of injury.
 - 1.3 Request assistance, as necessary.
2. Perform a primary survey, to identify and treat life-threatening problems.
 - 2.1 Follow all appropriate *RI EMS Prehospital Care Protocols and Standing Orders* to identify and treat life-threatening and critical conditions.
3. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
 - 3.1 Follow all appropriate *RI EMS Prehospital Care Protocols and Standing Orders* to perform the following:
 - 3.1.1 appropriate physical examination and medical history.
 - 3.1.2 assessment of vital signs (including respiratory rate, heart rate, and blood pressure), with frequent monitoring and/or reassessment.
 - 3.1.2.1. Abnormal vital signs for children and adults are shown in the table below.

Abnormal Vital Signs

Age	Respiratory Rate		Heart Rate		Systolic BP	
	TOO SLOW	TOO FAST	TOO SLOW	TOO FAST	TOO LOW	NOTE:
Newborn (birth–1 month)	<30	>80	<100	>200	<40	absent
Infant (1 month–1 year)	<20	>70	<80	>180	<60	radial
Pre-School (1–6 years)	<16	>40	<70	>160	<75	pulse
School Age (6–12 years)	<12	>30	<60	>140	<85	indicates
Adolescent (12–16 years)	<10	>24	<60	>120	<90	hypotension
Adult (= 16 years)	<10	>24	<60	>120	<90	



- 3.1.2.2 Core temperature measurement and regulation should be considered while caring for pediatric patients. Attempt to measure the temperature of any pediatric patient who may have a fever, cold exposure, or seizure. Pediatric patients, especially newborns, easily lose heat. Covering the head, heating the patient compartment, and using warmed IV fluids increase or maintain body temperature.

- 3.1.2.3. Use patient monitoring equipment, such as pulse oximeter and ECG monitor, if available.

4. Provide treatment, stabilizing or supportive care.

- 4.1 Follow all appropriate *RI EMS Prehospital Care Protocols and Standing Orders* to provide indicated treatment and psychological support.



- 4.2 If a person who is (or appears to be) <16 years old presents to EMS personnel with a condition that may reasonably be believed to require prehospital care and/or care at a HOSPITAL EMERGENCY FACILITY, EMTs are to attempt to contact the child's legal guardian in order to obtain the guardian's informed consent to prehospital care and/or transportation of the child.

4.2.1 If unable to contact the legal guardian, or if child abuse or neglect is suspected, contact Medical Control for authorization to provide prehospital care and transportation, and request assistance from local or state police (per section 40-11-5 RIGL).

4.2.2 If child abuse or neglect is suspected, transfer the child to the care of HOSPITAL EMERGENCY FACILITY personnel; then notify the Rhode Island Department for Children, Youth and their Families (1-800-RI-CHILD), as required by section 40-11-3 RIGL

- 4.3 For pediatric patients up to 5 feet tall (<35 kg/75 lbs), use the Broselow[®] tape approved by the Division of EMS to estimate patient weight; to determine appropriate equipment sizes; and to determine pre-calculated doses for most medications to be administered under standing orders.

4.3.1 Use adult protocols and standards for any pediatric patients beyond the range of the tape (>5 feet tall or >35 kg/75 lbs)

4.3.2 For small infants who weigh <3 kg/6.5 lbs, EMTs who are trained and licensed/certified by the RI Department of Health to perform endotracheal intubation are to use the following guidelines :

<u>Approximate Weight</u>	<u>Gestational Age</u>	<u>ET Tube Size</u>
<1500 grams (<3.5 lbs)	<30 weeks	2.5 mm
1500–2500 grams (3.5–5.5 lbs)	30–36 weeks	3.0 mm
>2500 grams (>5.5 lbs)	>36 weeks	3.5 mm

4.3.3 For the few medications not included on the Broselow[®] tape, and in case the tape is unavailable, pediatric drug dosages may be calculated using the patient's weight. IV admixtures and infusion rates may be calculated using the appropriate "Pediatric Rule of Sixes" (the formulas on which the Broselow[®] tape's calculations are based).

4.3.3.1 When necessary, the weight of a pediatric patient may be estimated, using the method shown below:

$$\text{Weight (in kilograms)} \approx 2 \times \text{age (in years)} + 8$$

Example: Estimated weight of 4 year old: $(2 \times 4) + 8 \approx 8 + 8 = 16$ kilograms



- 4.3.3.2 Estimated weight may then be used in the “Pediatric Rule of Sixes”, as follows:

Pediatric Rule of Sixes for DOPAMINE

mg to mix with **NORMAL SALINE** for a total volume of 100 mL = **6 x weight** (kilograms)

Administration rate of 1 mL/hour = 1 mcg/kg/min

Example: Preparation of a **DOPAMINE** infusion for 4 year old patient.

Weight of 4 year old? weight $\approx (2 \times 4) + 8 = 16$ kg

mg of **DOPAMINE** to mix with normal saline = 16 kg x 6 = **96** mg

Inject **96** mg **DOPAMINE** (2.4 mL of a 40 mg/mL solution) into 100 mL burette. Fill burette to 100 mL with **NORMAL SALINE**. Infusion rate of 5–20 mL/hour = 5–20 mcg/kg/min.

5. Communicate with Medical Control.

- 5.1 When the *State of Rhode Island Prehospital Care Protocols and Standing Orders* require the EMT to “contact Medical Control”, such “contact” is to be either **consultation** or **notification**, as differentiated below.

- 5.1.1 **Consultation** with Medical Control: **Direct voice contact between the EMT and physician is required.** In the rare circumstance in which direct access to a physician is not feasible, communication may be relayed *through a licensed health care professional*.

- 5.1.1.1 All EMTs are **permitted** to consult directly with a Medical Control physician at any time they feel such communication might be helpful in the care of a patient.

- 5.1.1.2 All EMTs are **required** to consult directly with a Medical Control physician when caring for any patient whose condition includes any of the following:

- (a) impaired consciousness;
- (b) any age-related abnormal heart rate, respiratory rate, or blood pressure, as defined in the table of Abnormal Vital Signs;
- (c) poisoning or overdose;
- (d) deterioration from a previously stable condition.

- 5.1.1.3 For any direct **consultation**, the EMT shall:

- 5.1.1.3.1 request Medical Control;

- 5.1.1.3.2 communicate directly with a designated Medical Control physician;

5.1.1.3.3 provide a brief report that includes at least the following:

- (a) EMS unit identification and level (BLS or ALS)
- (b) patient's sex, approximate age and weight
- (c) a statement of the chief complaint or apparent problem(s)
- (d) a brief history of the present illness or injury
- (e) a brief summary of the patient's relevant medical history
- (f) a report of the physical assessment, including vital and diagnostic signs
- (g) a summary of prehospital care provided
- (h) an estimated time until arrival

5.1.2. **Notification** of Medical Control

5.1.2.1 Many cases require only routine assessment, treatment, and transportation. For cases that meet **all** of the following criteria, direct consultation with a Medical Control physician is not required, and once en route the EMT may **notify** the **destination hospital staff** of the nature of the case and estimated time until arrival:

- (a) the patient is fully conscious; and
- (b) the patient has no age-related abnormal vital or diagnostic signs; and
- (c) the patient's condition does not include poisoning or overdose; and
- (d) the patient has not deteriorated from a previously stable condition.

5.1.2.2 The EMT responsible for such **notification** shall:

5.1.2.2.1 indicate that the contact is for notification;

5.1.2.2.2 communicate directly with the triage nurse or designated health care provider; and

5.1.2.2.3 provide a brief summary report that includes at least the following:

- (a) EMS unit identification and level (BLS or ALS)
- (b) patient's sex, approximate age, and approximate weight
- (c) a statement of the chief complaint or apparent problem(s)
- (d) a statement that the patient's vital signs are within normal age-related limits
- (e) a summary of pre-hospital care provided
- (f) an estimated time until arrival


6. Follow all appropriate *RI EMS Prehospital Care Protocols and Standing Orders* to transport the patient without delay to the appropriate HOSPITAL EMERGENCY FACILITY, except as specified below:
 - 6.1 Transport all patients in cardiac arrest, respiratory arrest, or respiratory failure to the nearest HOSPITAL EMERGENCY FACILITY, unless specifically directed to another destination by Medical Control.
 - 6.2 For all patients with unrelieved airway obstruction, contact Medical Control for guidance. Medical Control may direct transport to the nearest HOSPITAL or NON-HOSPITAL EMERGENCY FACILITY.





- 6.3 The signs and symptoms of pediatric patients developing serious illness or injury are often subtle. Therefore, all EMTs are required to transport all pediatric patients to a HOSPITAL EMERGENCY FACILITY for further evaluation, except as specified below:
 - 6.3.1 An informed refusal of EMS transport is provided by the patient (if = 16 years of age, or married, as provided by section 23-4.6-1 RIGL), or on the patient's behalf by a legal guardian (if patient <16 years of age); or
 - 6.3.2 Medical Control, in direct consultation with the EMT, specifically authorizes the EMT to release the patient; or
 - 6.3.3 For all patients with unrelieved airway obstruction, contact Medical Control for guidance. Medical Control may direct transport to the nearest HOSPITAL or NON-HOSPITAL EMERGENCY FACILITY.
- 6.4 All EMTs are required to transport pediatric patients in an appropriate child passenger restraint system or safety belt, unless
 - 6.4.1 care of the patient requires immobilization of the spinal column, pelvis, or lower extremities; or
 - 6.4.2 the patient requires resuscitation or active management of a critical problem.

7. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Airway Management and Respiratory Support

TREATMENT	Quick Reference
1. Provide initial airway management following the American Heart Association (AHA) BLS guidelines.	<i>Initial airway management</i>
1.1 Assume cervical spinal injury for all patients with sustained or suspected trauma, or impaired consciousness. In such cases stabilize the patient's head and cervical spine in the neutral position, and use the jaw-thrust maneuver without head-tilt.	<i>Assume spinal injury : Jaw-thrust without head tilt</i>
1.2 Insert an oropharyngeal airway or nasopharyngeal airway of the appropriate size as an airway maintenance adjunct.	<i>Oral or Nasal airway</i>
1.2.1 Attempt to insert a nasopharyngeal airway in patients who reject an oropharyngeal airway, unless contraindicated.	
1.3 Suction as necessary.	<i>Suction</i>
1.4 For unintubated patients, cricoid pressure may be used to minimize gastric distention during ventilation (apply gentle pressure for patients <8 years of age).	<i>Cricoid pressure</i>
 <p>1.5 For pediatric patients <5 feet tall (<35 kg/75 lbs) who demonstrate respiratory distress from suspected upper airway swelling, administer EPINEPHRINE as indicated below. BLS personnel must <u>contact Medical Control</u> for authorization.</p> <p>1.5.1 Administer EPINEPHRINE 5 mL of 1:1000 solution, by nebulizer over 5-15 minutes. May repeat once if necessary.</p>	<i>(Pediatric upper airway swelling: Epi)</i>
1.6 If airway obstruction is suspected, perform basic life support maneuvers according to AHA guidelines.	<i>? FBAO</i>
1.6.1 If airway obstruction does not respond to BLS techniques, or ventilation is still impossible, attempt to force air exchange around obstruction with increased pressure by mouth-to-mask or bag-valve-mask device.	<i>Forceful ventilation</i>

1.6.2	EMTs trained and licensed/certified by the RI Department of Health to perform endotracheal intubation may utilize the laryngoscope and suction or long forceps to remove the obstructing foreign body if abdominal or chest thrusts, finger sweep, and forceful ventilation are ineffective.	<i>Laryngoscope and forceps or suction.</i>
1.6.3	If foreign body is removed and patient remains apneic:	<i>If FBAO clears</i>
1.6.3.1	EMTs trained and licensed/certified by the RI Department of Health to perform endotracheal intubation are to attempt endotracheal intubation.	<i>ET Intubation</i>
1.6.3.2	EMTs who <u>are not</u> licensed/certified by the RI Department of Health to perform endotracheal intubation are to continue BLS efforts and <u>contact Medical Control</u> for assistance.	<i>Continue BLS Med Control</i>
1.6.4	If patient resumes spontaneous breathing, administer OXYGEN with the highest-concentration device tolerated, and assist ventilations as necessary.	<i>High conc O₂ (Ventilate)</i>
1.6.5	EMT-Ps only may attempt cricothyrotomy (<u>surgical</u> for patients ≥ 8 years of age; <u>needle</u> for patients <8 years of age) if instrumental removal of the foreign body is unsuccessful, or if unable to ventilate.	<i>Cricothyrotomy</i>
1.6.6	If airway obstruction is not relieved, <u>contact Medical Control</u> for further assistance.	<i>Med Control</i>
1.7	If epiglottitis is suspected in a patient who remains conscious, every effort should be made to keep the patient comfortable and calm (eg: defer attempts to start IVs).	<i>? Epiglottitis: Limit painful procedures</i>
2.	Provide OXYGEN to all patients with signs of serious illness or injury. Use the administration device and flow rate that provide the highest concentration of OXYGEN available, and are tolerated by the patient (eg: non-rebreather or simple mask at 6-10 liters/minute or more; nasal cannula at 2-6 liters/minute; "blow-by" for infants and small children).	<i>Oxygen: Use device that provides highest concentration</i>
 <p>2.1 Pediatric patients <5 feet tall (<35 kg/75 lbs): Use of warmed, humidified oxygen is preferred, whenever possible.</p>		<i>Pedi: warm, humidified</i>

<p>3. Ventilate (or assist the ventilations of) any patient with ineffective or absent respirations. Use high-flow supplemental OXYGEN, and ventilate at the appropriate rate, as shown in the table that follows.</p> <p>3.1 Adult patients: ventilate using one or more of the following devices:</p> <p>3.1.1 mouth-to-mask</p> <p>3.1.2 bag-valve-mask (BVM) device with oxygen reservoir; 2 EMT technique preferred</p> <p>3.1.3 manually triggered or automatic oxygen-powered ventilation device</p>	<p><i>Ventilation</i></p> <p><i>Adult</i></p> <p><i>-mouth-to-mask</i></p> <p><i>-BVM, 2 EMTs</i></p> <p><i>manual "demand" valve</i></p>
 <p>3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): ventilate using one or more of the following devices:</p> <p>3.2.1 mouth-to-mask</p> <p>3.2.2 bag-valve-mask (BVM) device with oxygen reservoir; 2 EMT technique preferred</p> <p>3.2.3 automatic oxygen-powered ventilation device specifically designed for intubated pediatric patients</p>	<p><i>Pediatric</i></p> <p><i>-mouth-to-mask</i></p> <p><i>BVM, 2 EMTs</i></p> <p><i>special pediatric transport vent.</i></p>

Ventilation Guidelines

Age	Respiratory Rate		Ventilation	Hyperventilation
	TOO SLOW	TOO FAST	BREATHS/MINUTE	BREATHS/MINUTE
Newborn (birth-1 month)	<30	>80	40-60	~60
Infant (1 month-1 year)	<20	>70	30-40	~45
Pre-School (1-6 years)	<16	>40	20-30	~45
School Age (6-12 years)	<12	>30	16-20	~30
Adolescent (12-16 years)	<10	>24	12-16	~30
Adult (≥16 years)	<10	>24	12-16	~30

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| <p>4. EMTs trained and licensed/certified by the RI Department of Health to perform endotracheal intubation may attempt to intubate any patient >1 month of age who is in respiratory or cardiorespiratory arrest.</p> <p>4.1 EMT-Ps only may attempt to intubate a patient for any of the conditions listed below. Other qualified EMTs must <u>contact Medical Control</u> for authorization:</p> <p>4.1.1 Respiratory distress with:</p> <p style="padding-left: 40px;">(a) bradycardia</p> <p style="padding-left: 40px;">(b) cyanosis despite supplemental oxygen</p> <p style="padding-left: 40px;">(c) impaired consciousness</p> <p>4.1.2 To protect the airway in cases of deep unconsciousness, absent gag reflex, or impending airway obstruction.</p> <p>4.1.3 Newborn infants (<1 month of age)</p> <p>4.1.4 In other situations as authorized by Medical Control.</p> <p>5. EMT-Ps only may attempt cricothyrotomy (<u>surgical</u> for patients ≥ 8 years of age; <u>needle</u> for patients <8 years of age) if instrumental removal of the foreign body is unsuccessful, or if unable to ventilate.</p> <p>6. <u>Contact Medical Control</u>.</p> <p>7. Transport the patient.</p> <p>7.1 Transport all patients in cardiac arrest, respiratory arrest, or respiratory failure to the nearest HOSPITAL EMERGENCY FACILITY, unless specifically directed to another destination by Medical Control.</p> <p>7.2 For all patients with unrelieved airway obstruction, <u>contact Medical Control</u> for guidance. Medical Control may direct transport to the nearest HOSPITAL or NON-HOSPITAL EMERGENCY FACILITY.</p> <p>8. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i>.</p> | <p><i>ET Intubation:
Respiratory or
cardiac arrest</i></p> <p><i>EMT-Ps; other
EMTs with Med
Control:</i></p> <p><i>bradycardia</i></p> <p><i>cyanosis</i></p> <p><i>impaired
consciousness</i></p> <p><i>coma; no gag;
impending
obstruction</i></p> <p><i>newborns</i></p> <p><i>per Med Control</i></p> <p><i>(cricothyrotomy)</i></p> <p><i>Med Control</i></p> <p><i>Transport</i></p> <p><i>Transport pts in
cardiac/
respiratory arrest,
respiratory failure
to nearest hospital
ED</i></p> <p><i>Med Control
direction for
transport of pts
with unrelieved
obstruction</i></p> <p><i>Document</i></p> |
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Biological Death

RECOGNITION OF BIOLOGICAL DEATH

1. An adult patient may be considered biologically dead if there is a lack of vital signs and at least one of the following:
 - 1.1 rigor mortis (rigid stiffness of the body)
 - 1.2 dependent lividity (purple/blue discoloration of those body areas closest to the ground)
 - 1.3 obvious injury incompatible with life (eg: decapitation)
 - 1.4 palpably cold body in the absence of any of the following:
 - 1.4.1 hypothermia from cold exposure
 - 1.4.2 cold water drowning
 - 1.4.3 drug overdose
 - 1.5 obvious changes of decomposition (ie: bloating, skin slippage, extensive green or black skin discoloration)



2. A pediatric patient may be considered biologically dead if there is a lack of vital signs and at least one of the following:
 - 2.1 obvious injury incompatible with life (eg: decapitation)
 - 2.2 obvious changes of decomposition (ie: bloating, skin slippage, extensive green or black skin discoloration)
3. By recognizing the evidence of lifelessness (as specified in RECOGNITION items 1 and 2 above) the EMS rescue personnel have made the **determination** of death. This **determination** by a licensed EMT does not constitute a **pronouncement** or certification of death, which are the responsibilities of a licensed physician.
4. The responsibility for a patient who is biologically dead lies with the state or local Police Department. Accordingly, the police should be contacted immediately. The Police Department is responsible for contacting the Medical Examiner's Office. The body should not be removed from the scene and the scene should be disturbed as little as possible.
5. Document all incident information by completing the *RI EMS Ambulance Run Report*.

-
6. For patients who **do not** meet the criteria for biological death:
 - 6.1 Any adult patient who does not meet the criteria above for biological death should be considered alive and treated following the *Cardiac Arrest* protocol, and be transported to a HOSPITAL EMERGENCY FACILITY.



- 6.2 Any pediatric patient without signs of life, including a newborn or potential SIDS fatality, who does not meet the criteria above for biological death should receive full resuscitative measures and be transported to a HOSPITAL EMERGENCY FACILITY.

- 6.3 For patients wearing a **COMFORT ONE** bracelet, follow the *Comfort One* protocol.
- 6.4 Transportation to a HOSPITAL EMERGENCY FACILITY is necessary only when resuscitation is undertaken. Follow the appropriate cardiac arrest protocol and contact Medical Control en route.
- 6.5. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Comfort One

INTRODUCTION

Advances in home health and hospice care have resulted in more chronically and terminally ill patients living in private residences or in nursing homes. Many of these patients do not wish to have CPR performed and have made formal **Living Will Declarations**; executed **Durable Power of Attorney** documents; or have a physician's **Do-Not-Resuscitate Order** recorded in their medical records.

LEGAL AUTHORITY

23.4.1 to 23-4.1-14 RIGL (*Emergency Medical Transportation Services*)

23-4.10 to 23-4.10-12 RIGL (*Health Care Power Of Attorney*)

23-4.11-2 to 23-4.11-14 RIGL (*Rights Of The Terminally Ill Act*)

PURPOSE

- (1) To provide symptom control, patient care and comfort measures during the dying process for **COMFORT ONE** patients.
- (2) To avoid resuscitation of patients who have **COMFORT ONE** status.
- (3) To clarify the role and responsibilities of prehospital care providers at the scene and/or while providing transportation for **COMFORT ONE** patients.

DEFINITIONS

- (1) The *COMFORT ONE* protocol is a set of standardized, state-wide patient care orders to be followed by emergency medical services personnel when encountering a **COMFORT ONE** patient. The protocol emphasizes that the patient will receive palliative, supportive care; but no resuscitative measures.
- (2) A **COMFORT ONE** patient is a patient who:
 - 2.1 has executed a **Living Will** and/or **Durable Power of Attorney**, and
 - 2.2 has been diagnosed as having a terminal condition, and
 - 2.3 has been issued a **COMFORT ONE** Bracelet.
 - 2.4 This designation also applies to patients having a physician authorized **Do-Not-Resuscitate (DNR) Order** recorded in the patient's medical record or a DNR order received directly from a physician in compliance with the *Medical Control at the Emergency Scene* protocol.

APPLICATION

The *COMFORT ONE* protocol is applicable to emergency medical services personnel acting in the non-hospital setting.

ACTIVATION/IDENTIFICATION

1. The **COMFORT ONE** status of a patient is confirmed and this protocol is activated when prehospital personnel have been presented with:
 - 1.1 A **COMFORT ONE** Bracelet on the patient (no further **COMFORT ONE** identification is necessary).
 - 1.1.1 Determine that **COMFORT ONE** Bracelet is intact and not defaced or damaged. Location of bracelet: wrist or ankle; necklace if extremities not available (sealed and closed bracelet on necklace chain).

- 1.2 A written **Do-Not-Resuscitate Order** authorized by a physician and documented in the patient's medical record.
- 1.3 A **Do-Not-Resuscitate Order** received directly from a physician in compliance with the *Medical Control at an Emergency Scene* protocol may activate the **COMFORT ONE** protocol.

EMS PROVIDER ACTIONS

1. Proceed with usual patient assessment and care **including** resuscitative measures UNTIL **COMFORT ONE** status is confirmed.
2. Upon verification of **COMFORT ONE** status:
 - 2.1 **DO NOT:**
 - 2.1.1 initiate CPR
 - 2.1.2 administer chest compressions
 - 2.1.3 intubate (ET or EOA)
 - 2.1.4 initiate cardiac monitoring
 - 2.1.5 start an IV for resuscitation
 - 2.1.6 administer cardiac resuscitation drugs
 - 2.1.7 defibrillate
 - 2.1.8 provide ventilatory assistance
 - 2.2 **DO** (as indicated by the patient's condition):
 - 2.2.1 suction airway
 - 2.2.2 administer oxygen
 - 2.2.3 position for comfort
 - 2.2.4 splint
 - 2.2.5 control bleeding
 - 2.2.6 provide emotional support
 - 2.2.7 if possible, determine if **Hospice** or **Home Health Agency** patient and contact appropriate agency
 - 2.2.8 contact the patient's attending physician or Medical Control for further orders
3. If efforts are begun prior to confirmation of **COMFORT ONE** status, discontinue the resuscitative measures upon verification of **COMFORT ONE** status. EMS personnel will not continue:
 - 3.1 CPR
 - 3.2 ventilatory assistance
 - 3.3 administration of cardiac medications
 - 3.4 Do not initiate IV lines, EOA or Endotracheal Intubation.
 - 3.4.1 Note: established IV lines, EOA or ET tube should remain in place.

REVOCATION

1. **BY THE PATIENT:** Regardless of mental or physical condition, the patient may revoke his/her **COMFORT ONE** status by:
 - 1.1 Physical cancellation or destruction of the **COMFORT ONE** Bracelet by:
 - 1.1.1 the patient; or
 - 1.1.2 the patient's surrogate decision maker; or
 - 1.1.3 another in the patient's presence and at the patient's direction.
 - 1.2 Direct communication with the prehospital care provider or other licensed health care provider by:
 - 1.2.1 the patient; or
 - 1.2.2 the patient's surrogate decision maker; or
 - 1.2.3 another in the patient's presence and at the patient's direction.
 - 1.3 Direct communication with the prehospital care provider, physician or other licensed health care provider by any person who witnesses the revocation of **COMFORT ONE** status by a qualified patient.
 - 1.3.1 **A revocation communicated by family or by another who did not witness the revocation is not valid in the emergency or transport setting.**
2. **BY A PHYSICIAN:** A physician may revoke a **Do-Not-Resuscitate Order** by writing such a revocation in the patient's medical record, provided there is no **COMFORT ONE** Bracelet present.
3. **BY MEDICAL CONTROL:** A **Do-Not-Resuscitate Order** may be revoked directly by a physician in compliance with the *Medical Control at an Emergency Scene* protocol, provided there is no **COMFORT ONE** Bracelet present.
4. EMS personnel or other licensed health care providers, upon witnessing or verifying a **COMFORT ONE** revocation, must communicate that revocation in writing so as to include this information in the patient's medical record. For prehospital care providers, the revocation shall be documented on the standard *RI EMS Ambulance Run Report*.

DOCUMENTATION

1. The minimum **COMFORT ONE** ambulance/rescue report information shall include:
 - 1.1 use of a standard *RI EMS Ambulance Run Report*. Indicate the use of **COMFORT ONE** in the space allotted.
 - 1.2 patient's name, gender, estimated age
 - 1.3 attending physician
 - 1.4 **COMFORT ONE** identification seen. Document method of identification (**COMFORT ONE** Bracelet or **Do-Not-Resuscitate Order** per medical record) that was used to confirm **COMFORT ONE** status. Note that **COMFORT ONE** Bracelet was intact, not defaced, not canceled, or not officially revoked. Include the name of the patient's attending physician.
 - 1.5 time, date, location of event
 - 1.6 description of event
 - 1.7 assessment findings
 - 1.8 care provided
 - 1.9 any **COMFORT ONE** revocation directly witnessed by EMS personnel or communicated to EMS personnel by family, surrogate decision maker or another who witnessed the revocation

2. If transporting the patient, keep **COMFORT ONE** Bracelet (intact or removed) and/or Interagency Referral Form with the patient.
3. If **COMFORT ONE** order was issued per *Medical Control at the Emergency Scene* protocol, provide date and physician's name as well as other pertinent information per protocol.

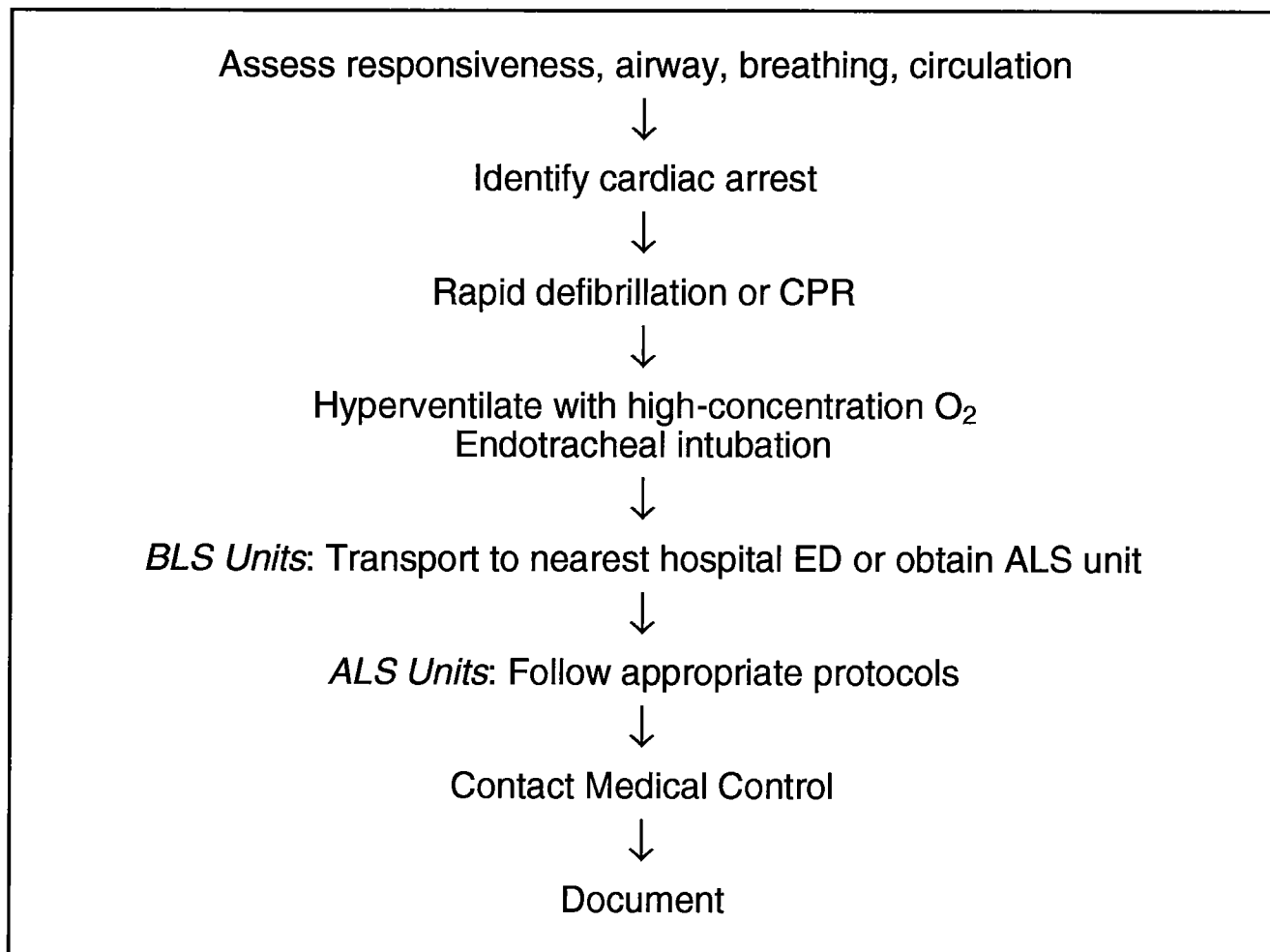
INTERACTION WITH FAMILY/BYSTANDER

1. If family/bystanders request resuscitative efforts for a patient with **COMFORT ONE** status:
 - 1.1 Provide explanation, reassurance and support to family/bystanders.
 - 1.2 Do not initiate CPR.
 - 1.3 Provide palliative care and comfort to patient.
 - 1.4 If possible, determine if **Hospice** or **Home Health Agency** patient and contact appropriate agency.
 - 1.5 Contact Medical Control for guidance.

GENERAL CONSIDERATIONS

1. **COMFORT ONE** status means providing all possible comfort care. Treat both the patient and family with care and concern.
2. Consider **COMFORT ONE** status invalid if:
 - 2.1 No **COMFORT ONE** Bracelet is present.
 - 2.2 The **COMFORT ONE** Bracelet is not attached or has been tampered with.
 - 2.3 A written **Do-Not-Resuscitate Order** authorized by a physician and documented in the patient's medical record is not presented to prehospital care personnel.
3. If the patient has expired on arrival, comfort family and follow *Biological Death* protocol. Document all incident information by completing the *RI EMS Ambulance Run Report*.

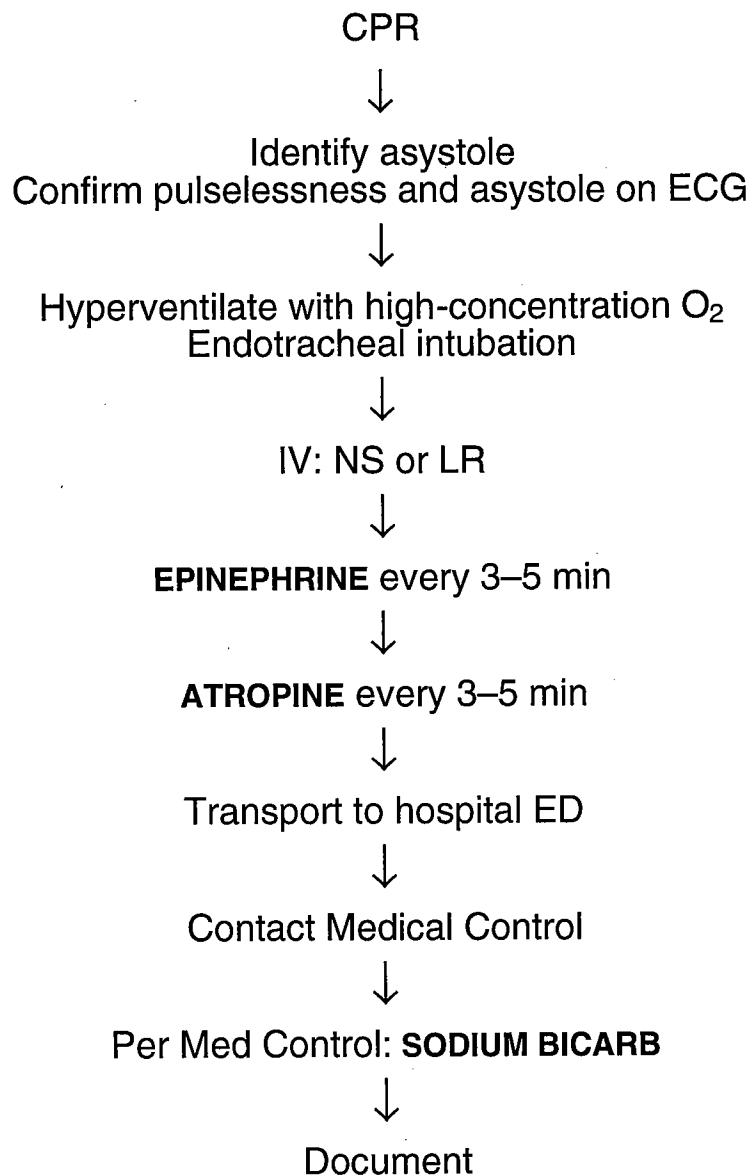
Cardiac Arrest Flowchart



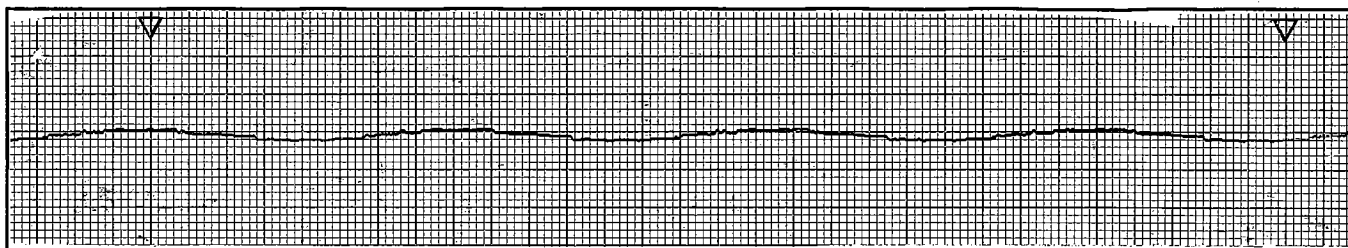
Cardiac Arrest

TREATMENT	Quick Reference
<ol style="list-style-type: none"> 1. Quickly check for unresponsiveness, airway patency, spontaneous respirations, and carotid pulses. 2. If there is a cardio-pulmonary arrest, immediately begin the Basic Life Support (CPR) sequence of the American Heart Association or the American Red Cross unless defibrillation is immediately available. 	<p>Check A-B-C</p> <p>Defibrillate and/or CPR</p>
▼ BLS PERSONNEL 2.1 If defibrillation is available and indicated, follow the <i>Defibrillation Procedure: Manual or Defibrillation Procedure: AED</i> protocol.	<i>BLS protocol: Defib: Manual or Defib: AED</i>
▼ ALS PERSONNEL 2.2 If defibrillation is available and indicated, follow the <i>Ventricular Fibrillation and Pulseless Ventricular Tachycardia [ALS]</i> protocol.	<i>ALS protocol: VF and Pulseless VTach</i>
▼ ALL EMTs 2.3 Do not cease CPR for more than 5 seconds until the patient has been stabilized, except as permitted below: <ol style="list-style-type: none"> 2.3.1 CPR may be interrupted for a maximum of 30 seconds to intubate or move the patient; 2.3.2 CPR may be discontinued with authorization from a Medical Control physician. 3. EMTs trained and licensed/certified by the RI Department of Health to perform endotracheal intubation may perform endotracheal intubation (patients >1 month old), following the <i>Endotracheal Intubation</i> protocol. <ol style="list-style-type: none"> 3.1 Use EOA, oropharyngeal, or nasopharyngeal airway adjuncts if unable to perform endotracheal intubation. 3.2 Do not use EOA in patients <5 feet tall. 4. Whenever possible, use high-concentration OXYGEN to hyperventilate the patient at the appropriate rate. 5. Basic Life Support units should transport the patient without delay to the nearest appropriate <u>HOSPITAL EMERGENCY FACILITY</u> or consider use of an Advanced Life Support unit, if one is available.	<p><i>Interrupt CPR ≤5 seconds</i></p> <p><i>exception: ETT, move pt</i></p> <p><i>exception: Med Control</i></p> <p><i>ET Intubation</i></p> <p><i>Hyperventilate high conc O₂</i></p> <p><i>Transport or obtain ALS</i></p>
▼ ALS PERSONNEL 6. Follow all appropriate protocols.	<i>ALS protocols</i>
▼ ALL EMTs 7. <u>Contact Medical Control</u> . 8. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> .	<p><i>Med Control</i></p> <p><i>Document</i></p>

Asystole [ALS] Flowchart



Asystole [ALS]



RECOGNITION: Unresponsive, apneic, pulseless patient.

TREATMENT

1. Begin the Basic Life Support (CPR) sequence of the American Heart Association or the American Red Cross.

1.1 Do not cease CPR for more than 5 seconds, except for a maximum of 30 seconds to intubate or move the patient, until the patient has been stabilized, or until authorized by Medical Control to do so.



2. For infants up to 1 month of age, follow the *Newborn Resuscitation* protocol.

3. Check the pulse. Follow the *Asystole* protocol only if the pulse is absent.

4. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.

5. Check the leads and monitor to see if unit is functioning properly.

6. If rhythm is unclear and possibly low amplitude ventricular fibrillation, defibrillate following the *Ventricular Fibrillation* protocol.

7. Intubate with an endotracheal tube or esophageal obturator airway, following the *ET* or *EOA* protocol.

7.1 Whenever possible, hyperventilate the patient at the appropriate rate, using high concentration **OXYGEN**.

8. Start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** to run at KVO rate for routine cardiac arrest.

8.1 Adult patients: administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (20–30 mL/hour).



8.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (10–20 mL/hour).

8.3 If unable to establish IV in ≤2 attempts (<5 minutes) continue CPR and transport the patient to the nearest HOSPITAL EMERGENCY FACILITY immediately. Any further attempt at IV placement must occur en route.

Quick Reference

CPR

*Infant <1 month:
Follow Newborn
Resuscitation*

Recheck pulse

Monitor ECG

Check monitor

Rule out V Fib

Intubate

*Hyperventilate
High conc O₂*

IV: NS or LR

*Adult:
20–30 mL/hr*

*Pedi:
10–20 mL/hr*

9. Administer **EPINEPHRINE** as indicated below:*Epinephrine*

- 9.1 Adult patients: administer **EPINEPHRINE 1:10,000** 1.0 mg IV push. Repeat every 3–5 minutes if asystole persists.

9.1.1 At any time after first dose of **EPINEPHRINE**, ALS personnel may contact Medical Control for authorization to administer **EPINEPHRINE 1:1,000** 2.0–5.0 mg IV push every 3–5 minutes if asystole persists.

9.1.2 If unable to establish an IV, administer **EPINEPHRINE 1:1,000** 2.0–2.5 mg diluted in 10 mL **NORMAL SALINE** by endotracheal tube. Repeat every 3–5 minutes if asystole persists.



- 9.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **EPINEPHRINE** as indicated on Broselow® Tape, and repeat every 3–5 minutes as necessary:

Epinephrine, per Broselow® Tape

9.2.1 First dose (IV push): **EPINEPHRINE 1:10,000** 0.01 mg/kg (0.1 mL/kg).

9.2.2 Additional doses (IV push): **EPINEPHRINE 1:1,000** 0.1 mg/kg (0.1 mL/kg).

9.2.2.1 At any time after first dose of **EPINEPHRINE**, ALS personnel may contact Medical Control for authorization to administer additional doses of **EPINEPHRINE 1:1,000** up to 0.2 mg/kg (0.2 mL/kg) IV push.

9.2.3 Endotracheal doses: **EPINEPHRINE 1:1,000** 0.1 mg/kg (0.1 mL/kg), diluted to 3–5 mL with **NORMAL SALINE**.

10. If still asystolic, administer **ATROPINE SULFATE** as indicated below:*Atropine*

- 10.1 Adult patients: administer **ATROPINE SULFATE** 1.0 mg IV push. Repeat every 3–5 minutes if asystole persists, to a maximum of 3.0 mg.

10.1.1 If unable to establish an IV, administer **ATROPINE SULFATE** 1–2 mg diluted in 10 mL **NORMAL SALINE** by endotracheal tube. Repeat every 3–5 minutes if asystole persists, to a maximum of 3.0 mg.



- 10.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **ATROPINE SULFATE** per Broselow® Tape: 0.02 mg/kg IV push (minimum dose: 0.1 mg). Repeat every 3–5 minutes if asystole persists, to a maximum of 1.0 mg (child), 2.0 mg (adolescent).

Atropine, per Broselow® Tape

10.2.1 If unable to establish an IV, administer **ATROPINE SULFATE** 0.05 mg/kg diluted to 3–5 mL with **NORMAL SALINE** by endotracheal tube. Repeat every 3–5 minutes if asystole persists, to a maximum of 1.0 mg (child), 2.0 mg (adolescent).

11. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.*Transport*

12. Contact Medical Control.

12.1 Adult patients: Medical Control may authorize administration of **EPINEPHRINE 1:1000** 2.0–5.0 mg IV push, every 3–5 minutes.

Med Control
(Epinephrine)



12.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): Medical Control may authorize administration of additional doses of **EPINEPHRINE 1:1,000** up to 0.2 mg/kg (0.2 mL/kg) IV push every 3–5 minutes.

(Epinephrine)

12.3 For certain conditions, Medical Control may authorize administration of **SODIUM BICARBONATE** 1 mEq/kg IV push, followed by 0.5 mEq/kg IV push every 10 minutes.

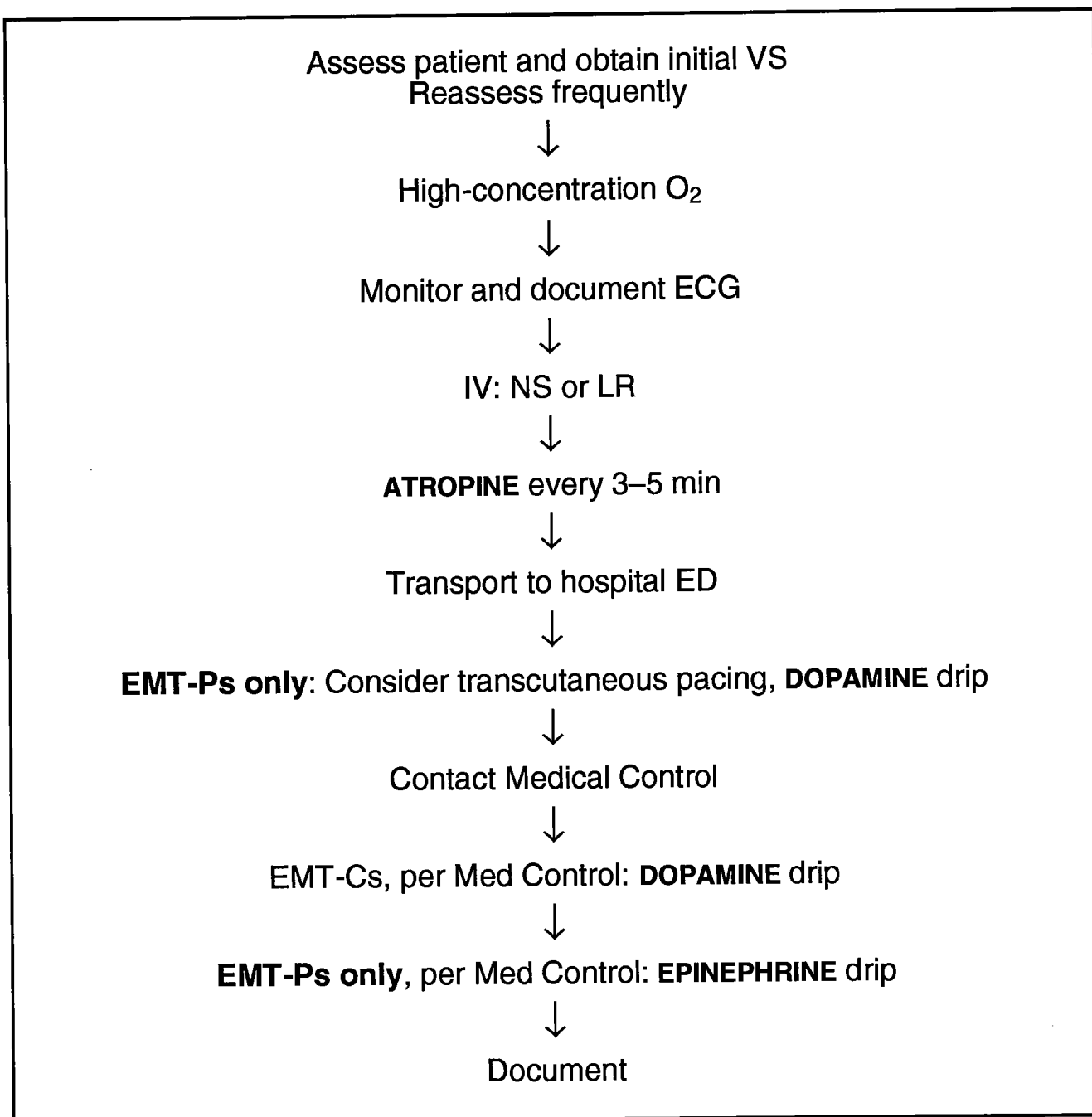
(Sodium
Bicarbonate)

13. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Document

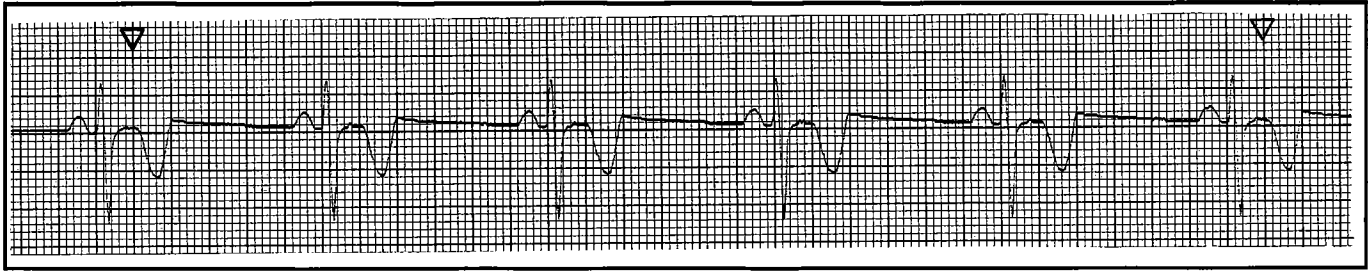
Bradycardia (Symptomatic) [ALS]

Flowchart



Bradycardia (Symptomatic) [ALS]

For pediatric patients <5 feet tall (<35 kg/75 lbs), follow *Bradycardia (Pediatric)* protocol.



RECOGNITION

Ventricular rate <60 per minute in a suspected cardiac patient, with any of the following: chest pain; dyspnea; decreased level of consciousness; hypotension; shock; ventricular escape beats; or CHF.

TREATMENT

1. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
2. Loosen tight clothing and allow the patient to sit in a comfortable position unless hypotensive.
3. Administer **OXYGEN** with the highest-concentration device tolerated.
4. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
5. Start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution to run at KVO rate (20–30 mL/hour).
 - 5.1 If unable to establish an IV in ≤2 attempts (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.
6. Administer **ATROPINE SULFATE** 0.5–1.0 mg IV push. Repeat every 3–5 minutes if symptomatic bradycardia persists, to a maximum of 3.0 mg.
 - 6.1 If unable to establish an IV and there is an endotracheal tube in place, administer **ATROPINE SULFATE** 1–2 mg diluted in 10 mL **NORMAL SALINE** by endotracheal tube. Repeat every 3–5 minutes if symptomatic bradycardia persists, to a maximum of 3.0 mg.
7. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.

Quick Reference

Physical Exam & Vital Signs

Patient comfort

High conc O₂

Monitor ECG

IV: NS or LR

Atropine

Transport

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>8. EMT-Ps only. Consider use of either or both of the following.</p> <p>8.1 Perform transcutaneous pacing, if available.</p> <p>8.2 Administer DOPAMINE HCl by IV infusion as indicated below.</p> <p>8.2.1 Administer DOPAMINE HCl at 5–20 mcg/kg/min IV (400 mg in 250 mL D₅W or NS = 1600 mcg/mL) and titrate the rate to achieve a systolic blood pressure >90 mm Hg.</p> <p>9. <u>Contact Medical Control.</u></p> <p>9.1 With authorization from Medical Control, EMT-Cs may administer DOPAMINE HCl by IV infusion as indicated below:</p> <p>9.1.1 Administer DOPAMINE HCl at 5–20 mcg/kg/min IV (400 mg in 250 mL D₅W or NS = 1600 mcg/mL) and titrate the rate to achieve a systolic blood pressure >90 mm Hg.</p> <p>9.2 EMT-Ps only: With authorization from Medical Control, may administer EPINEPHRINE by IV infusion as indicated below:</p> <p>9.2.1 Infuse EPINEPHRINE 0.05–0.20 mcg/kg/min.</p> <p>10. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i>.</p> | <p><i>External Pacing</i></p> <p><i>Dopamine</i></p>
<p><i>Med Control</i></p> <p><i>(Dopamine)</i></p>
<p><i>(Epi drip)</i></p>
<p><i>Document</i></p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Bradycardia (Pediatric) Flowchart

(For newborns infants, refer to *Newborn Resuscitation* protocol)

Assess patient; obtain initial VS
Treat shock, following *Shock* protocol



High-concentration O₂
Assist with BVM



Hyperventilate with high-concentration O₂
Endotracheal intubation



HR ≥60: BVM or supplemental O₂
HR <60 with shock: CPR → HR ≥60



Monitor and document SpO₂ (if able) and ECG



IV: NS or LR



EPINEPHRINE every 3–5 min



Consider **ATROPINE** every 3–5 min



EMT-Ps only: Consider transcutaneous pacing



Contact Medical Control



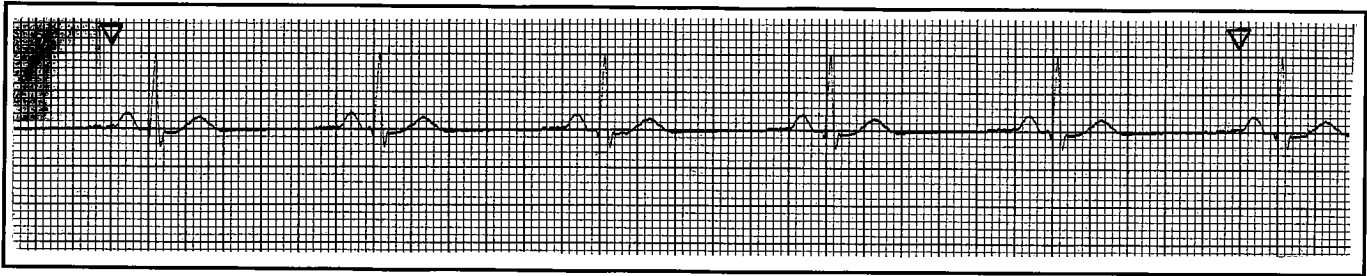
Transport to hospital ED



Document



Bradycardia (Pediatric)



RECOGNITION

A slow ventricular rate (as shown in the following table) accompanied by any of the following: chest pain; respiratory distress; decreased level of consciousness; hypotension; shock; CHF.

Note: Pediatric bradycardia is usually due to hypoxemia.

Age	Respiratory Rate		Heart Rate		Systolic BP	
	TOO SLOW	TOO FAST	TOO SLOW	TOO FAST	TOO LOW	NOTE:
Newborn (birth–1 month)	<30	>80	<100	>200	<40	absent
Infant (1 month–1 year)	<20	>70	<80	>180	<60	radial
Pre-School (1–6 years)	<16	>40	<70	>160	<75	pulse
School Age (6–12 years)	<12	>30	<60	>140	<85	indicates
Adolescent (12–16 years)	<10	>24	<60	>120	<90	hypotension

TREATMENT

1. For newborn infants, refer to the *Newborn Resuscitation* protocol.
2. Perform a rapid exam, including assessment of the following:
 - (a) level of consciousness/responsiveness, airway maintenance
 - (b) respiratory rate and effort, skin/mucous membrane color
 - (c) heart rate, distal pulses, temperature, capillary refill, BP
3. If there is evidence of shock, follow the *Shock* protocol.
4. Administer **OXYGEN** with the highest-concentration device tolerated.
 - 4.1 Children with impaired consciousness, cyanosis, or signs of shock require assisted ventilations with high-concentration **OXYGEN** and airway adjuncts.
 - 4.1.1 Perform endotracheal intubation, as indicated in the *Airway Management and Respiratory Support* protocol.

Quick Reference

Rapid Exam

Treat shock

High conc O₂

*BVM with
high conc O₂*

(ET Intubation)

- 4.2 Whenever possible, use high-concentration oxygen to hyperventilate the patient at the appropriate rate shown in the following table:

Hyperventilate
High conc O₂

Ventilation Guidelines

Age		Hyperventilation
		BREATHS/MINUTE
Newborn	(birth–1 month)	~60
Infant	(1 month–1 year)	~45
Pre-School	(1–6 years)	~45
School Age	(6–12 years)	~30
Adolescent	(12–16 years)	~30

5. Re-evaluate heart rate (monitor ECG, if able).

Re-eval. HR

- 5.1 If heart rate is ≥ 60 /minute, continue assisted ventilations and/or resuscitation as needed for breathing (ie: BVM ventilations or supplemental **OXYGEN**).

High conc O₂
(BVM Ventilation)

- 5.2 If heart rate is < 60 /minute and there is evidence of shock despite supplemental oxygenation and ventilation, perform chest compressions at rate of at least 100/minute (infants < 1 year old) or 80–100/minute (children ≥ 1 year old). Continue CPR until spontaneous heart rate ≥ 60 /minute.

(CPR)

6. Monitor patient's oxygen saturation, if pulse oximeter is available.

(SpO₂)

▼ ALS PERSONNEL

7. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
8. Start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution at keep vein open rate, 10–20 mL/hour
- 8.1 If unable to establish IV in ≤ 2 attempts (< 5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY immediately. Any further attempt at IV placement must occur en route.
9. Administer **EPINEPHRINE** as indicated on Broselow® Tape, and repeat every 3–5 minutes as necessary:
- 9.1 IV push dose: **EPINEPHRINE 1:10,000** 0.01 mg/kg (0.1 mL/kg)
- 9.2 Endotracheal dose: **EPINEPHRINE 1:1,000** 0.1 mg/kg (0.1 mL/kg)
10. If bradycardia continues, consider **ATROPINE SULFATE** as indicated on Broselow® Tape, to treat increased vagal tone:
- 10.1 IV push dose: **ATROPINE SULFATE** 0.02 mg/kg (0.02 mL/kg); may repeat once in 5 minutes if necessary. Minimum dose: 0.1 mg; maximum dose: 1.0 mg (child); 2.0 mg (adolescent).
- 10.2 Endotracheal dose: **ATROPINE SULFATE** 0.05 mg/kg (0.05 mL/kg) IV; may repeat once in 5 minutes if necessary. Minimum dose: 0.1 mg; maximum dose: 1.0 mg (child); 2.0 mg (adolescent).
11. **EMT-Ps only.** Consider transcutaneous pacing, if available.

Monitor ECG

IV: NS or LR

Epinephrine per
Broselow® Tape

(Atropine per
Broselow® Tape)

External Pacing

▼ ALL EMTs

12. Contact Medical Control.
13. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.
14. Document all incident information by completing the *RI EMS Ambulance Run Report.*

*Med Control**Transport**Document*

Chest Pain in a Suspected Cardiac Patient

RECOGNITION

Patient with severe, crushing chest pain; mild to severe substernal chest pain; diaphoresis; nausea; vomiting. Pain may radiate to jaw, arms, or neck. Patient may have history of cocaine usage.

TREATMENT

1. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
2. Loosen tight clothing and allow the patient to sit in a comfortable position unless hypotensive.
3. Administer **OXYGEN** with the highest-concentration device tolerated.
4. Adult patients: administer **ASPIRIN** (320 – 500 mg).

Quick Reference

*Physical Exam
& Vital Signs*

Patient comfort

High conc O₂

Aspirin

▽ BLS PERSONNEL

5. Contact Medical Control for authorization to perform the following:
 - 5.1 Adult patients with systolic BP ≥ 90 mm Hg: administer **NITROGLYCERIN** 0.4 mg (1/150 grain) sublingually, by tablet or oral spray, of the patient's own medication only. Monitor blood pressure every 3 minutes.

Med Control

*(Nitroglycerin;
Monitor BP)*

▽ ALS PERSONNEL

6. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
7. Start an IV access device or at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** to run at KVO rate.
 - 7.1 Adult patients: If an IV has been started, administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (20–30 mL/hour).


Monitor ECG

*IV Access
or
IV: NS or LR*



- 7.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): If an IV has been started, administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (10–20 mL/hour).

- 7.3 If unable to establish IV in ≤ 2 attempts (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.

▽ ALS PERSONNEL	
<p>8. Adult patients with systolic BP \geq 90 mm Hg: administer NITROGLYCERIN 0.4 mg (1/150 grain) sublingually, by tablet or oral spray. Repeat every 5 minutes, for as long as patient has chest pain and systolic blood pressure \geq 90 mm Hg. Monitor blood pressure every 3 minutes.</p> <p>8.1 If unable to establish an IV, EMTs may still administer NITROGLYCERIN for patient with systolic BP >150 mm Hg.</p> <p>8.2 If chest pain is unchanged after third dose of NITROGLYCERIN, EMTs may administer Mylanta® 30 mL, if available, by mouth while continuing NITROGLYCERIN sequence.</p>	<p><i>Nitroglycerin</i> <i>Monitor BP</i></p> <p><i>(Mylanta®)</i></p>
 <p>8.3 Pediatric patients <5 feet tall (<35 kg/75 lbs): administration of NITROGLYCERIN requires authorization from Medical Control.</p>	
<p>9. Treat specific dysrhythmias, following all appropriate protocols.</p> <p>10. <u>Contact Medical Control</u> for authorization to perform any of the following:</p> <p>10.1. Provide pain relief, following the <i>Pain Management and Sedation</i> protocol.</p> <p>10.2 Administer LIDOCAINE HCl 1.0–1.5 mg/kg IV push. Repeat at 10 minute intervals x2, at 0.5–0.75 mg/kg. Maximum total dose: 3 mg/kg.</p> <p>10.3 If NITROGLYCERIN sequence has not been completed, administer Mylanta® 30 mL, if available, by mouth.</p>	<p><i>Treat specific dysrhythmias</i></p> <p><i>Med Control</i> <i>(Pain relief)</i></p> <p><i>(Lidocaine)</i> <i>(Mylanta®)</i></p>
▽ ALL EMTs	
<p>11. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u>.</p> <p>12. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i>.</p>	<p><i>Transport</i> <i>Document</i></p>

Congestive Heart Failure (Pulmonary Edema)

RECOGNITION

Respiratory distress without upper airway obstruction; heart rate >120 (adult); respiratory rate >30 (adult); jugular venous distention; rales; diaphoresis; past history of congestive heart failure.

TREATMENT

1. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
2. Loosen tight clothing and allow the patient to sit in a comfortable position unless hypotensive.
3. Administer **OXYGEN** with the highest-concentration device tolerated.
4. Adult patients: administer **ASPIRIN** (320-500 mg).

Quick Reference

Physical Exam
& Vital Signs

Patient comfort

High conc O₂

Aspirin

▽ BLS PERSONNEL

5. Contact Medical Control for authorization to perform any or all of the following:
 - 5.1 Adult patients with systolic BP \geq 90 mm Hg: administer **NITROGLYCERIN** 0.4 mg (1/150 grain) sublingually, by tablet, or by oral spray, of the patient's own medication only. Monitor blood pressure every 3 minutes.
 - 5.2 For patients who are wheezing, administer **ALBUTEROL** as indicated below:
 - 5.2.1 Patients \geq 6 months of age: administer 2.5 mg of **ALBUTEROL** 0.083% solution (or 0.5 mL of 0.5% solution mixed with 2.5 mL **NORMAL SALINE**) by nebulizer over 5–15 minutes. May repeat x 2 en route.
 - 5.2.2 Patients <6 months of age: administer 1.25 mg of **ALBUTEROL** 0.083% solution (or 0.25 mL of 0.5% solution mixed with 2.5 mL **NORMAL SALINE**) by nebulizer over 5 to 15 minutes. May repeat x 2 en route.

Med Control

(Nitroglycerin;
Monitor BP)

(Albuterol)

Patients \geq 6
months:
Albuterol by
nebulizer

Patients <6
months:
Albuterol by
nebulizer





▽ ALS PERSONNEL


6. For patients who are wheezing, administer **ALBUTEROL** as indicated below:
 - 6.1 Patients \geq 6 months of age: administer 2.5 mg of **ALBUTEROL** 0.083% solution (or 0.5 mL of 0.5% solution mixed with 2.5 mL **NORMAL SALINE**) by nebulizer over 5–15 minutes. May repeat x 2 en route.
 - 6.2 Patients < 6 months of age: administer 1.25 mg of **ALBUTEROL** 0.083% solution (or 0.25 mL of 0.5% solution mixed with 2.5 mL **NORMAL SALINE**) by nebulizer over 5 to 15 minutes. May repeat x 2 en route.

Patients \geq 6
months:
Albuterol by
nebulizer

Patients < 6
months:
Albuterol by
nebulizer

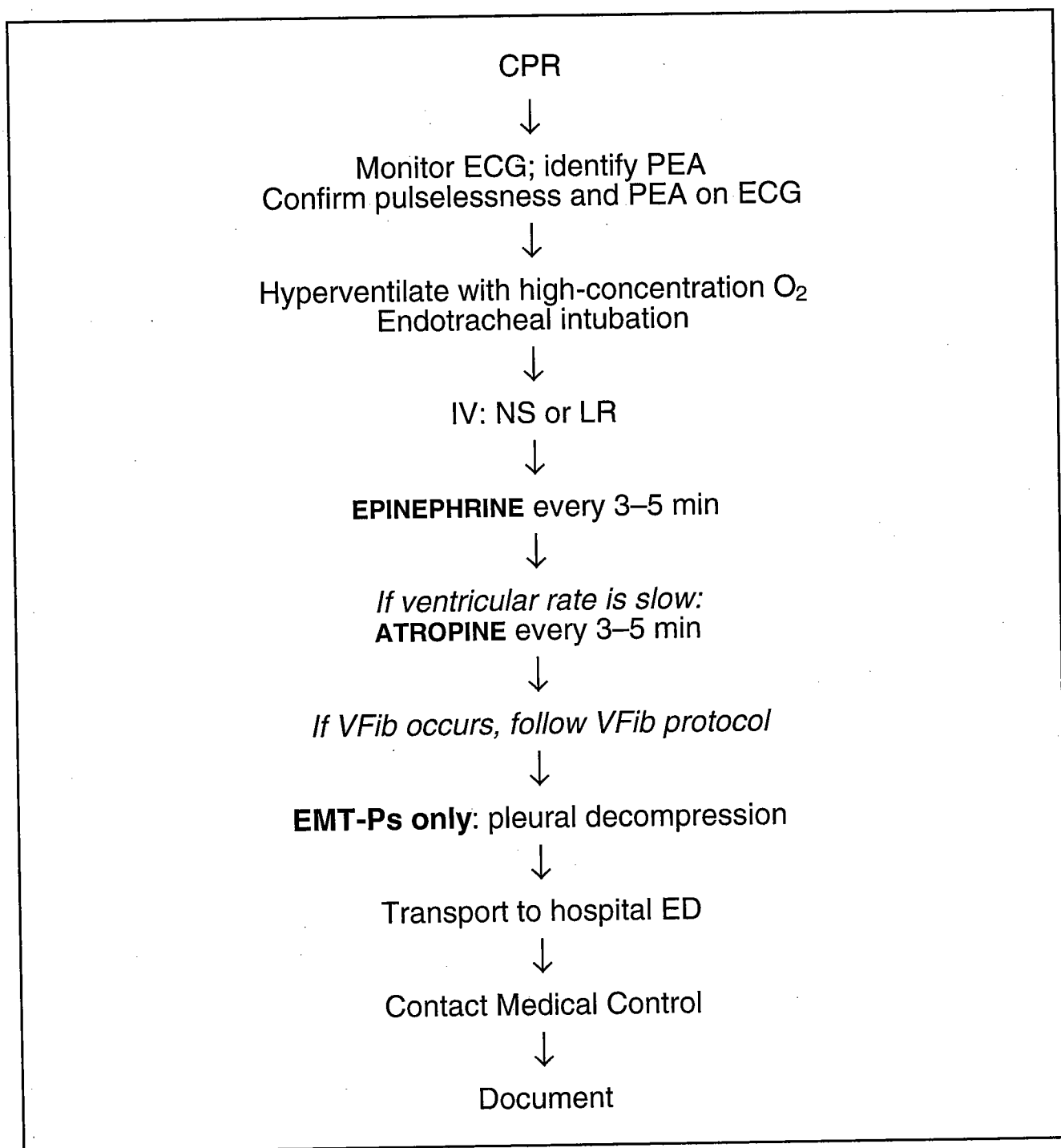


▽ ALS PERSONNEL	
<p>7. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the <i>RI EMS Ambulance Run Report</i>.</p> <p>8. Start an IV access device or at least one IV of NORMAL SALINE or LACTATED RINGER'S to run at KVO rate.</p> <p>8.1 Adult patients: If an IV has been started, administer NORMAL SALINE or LACTATED RINGER'S solution at KVO (20–30 mL/hour).</p>	<p>Monitor ECG</p> <p>IV Access or IV: NS or LR</p>
 <p>8.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): If an IV has been started, administer NORMAL SALINE or LACTATED RINGER'S solution at KVO (10–20 mL/hour).</p>	
<p>8.3 If unable to establish IV in ≤ 2 attempts (<5 minutes) transport the patient to a <u>HOSPITAL EMERGENCY FACILITY</u>. Any further attempt at IV placement must occur en route.</p> <p>9. Adult patients with systolic BP ≥90 mm Hg: administer NITROGLYCERIN 0.4 mg (1/150 grain) sublingually, by tablet or by oral spray. Repeat every 5 minutes, for as long as patient has respiratory distress and systolic blood pressure ≥90 mm Hg. Monitor blood pressure every 3 minutes.</p> <p>9.1 If unable to establish an IV, EMTs may still administer NITROGLYCERIN for patient with systolic BP >150 mm Hg.</p>	<p>Nitroglycerin Monitor BP</p>
 <p>9.2 <u>Pediatric patients <5 feet tall (<35 kg/75 lbs): administration of NITROGLYCERIN requires authorization from Medical Control.</u></p>	
<p>10. Treat specific dysrhythmias following all appropriate protocols.</p> <p>11. Administer FUROSEMIDE (Lasix®) as indicated below:</p> <p>11.1 Adult patients who do not take daily oral FUROSEMIDE (Lasix®): administer FUROSEMIDE (Lasix®) 40 mg IV over 2 minutes.</p> <p>11.2 Adult patients who do take daily oral FUROSEMIDE (Lasix®): administer FUROSEMIDE (Lasix®) IV at double the daily oral dose (not to exceed 240 mg); administer up to 100 mg IV push; administer the remainder (up to 140 mg) at a rate <20 mg/minute.</p>	<p>Treat specific Dysrhythmias Furosemide (Lasix®)</p>

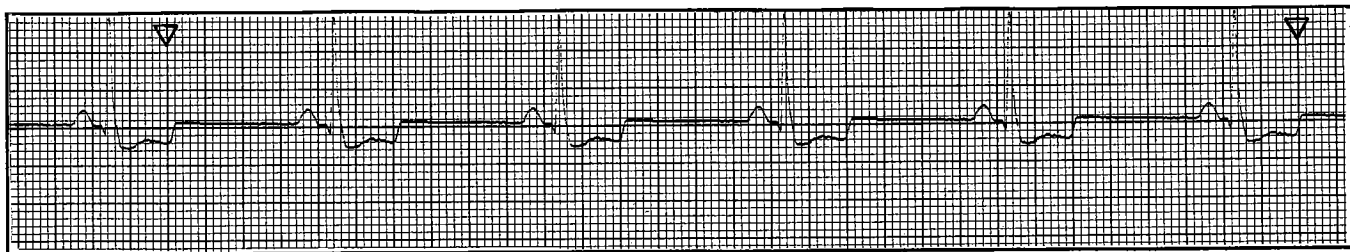
<p>▽ ALS PERSONNEL</p>  <p>11.3 Pediatric patients <5 feet tall (<35 kg/75 lbs) who <u>do not</u> take daily oral FUROSEMIDE (Lasix®): administer FUROSEMIDE (Lasix®) per Broselow® Tape: 1 mg/kg (not to exceed 20 mg), IV over 2 minutes.</p> <p>11.4 Pediatric patients <5 feet tall (<35 kg/75 lbs) who <u>do</u> take daily oral FUROSEMIDE (Lasix®): administer FUROSEMIDE (Lasix®) at double the daily oral dose (not to exceed 40 mg), IV over 2 minutes.</p> <p>12. <u>Contact Medical Control</u>. For patients exhibiting significant respiratory distress, administer MORPHINE SULFATE, following the <i>Pain Management and Sedation</i> protocol.</p>	<p><i>Furosemide per Broselow® Tape</i></p> <p><i>Med Control (Morphine Sulfate)</i></p>
<p>▽ ALL EMTs</p> <p>13. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u>.</p> <p>14. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i>.</p>	<p><i>Transport</i></p> <p><i>Document</i></p>

Pulseless Electrical Activity (PEA) [ALS]

Flowchart



Pulseless Electrical Activity (PEA) [ALS]



RECOGNITION

Unresponsive, apneic, pulseless patient with electrical activity other than **ventricular fibrillation** (VF) or **ventricular tachycardia** (VT).

Note: Causes of PEA include: acidosis; cardiac tamponade; hypothermia; hypovolemia; hypoxia; myocardial infarction; overdose; pulmonary embolus; shock; and tension pneumothorax.

TREATMENT

1. Begin the Basic Life Support (CPR) sequence of the American Heart Association or the American Red Cross.
 - 1.1 Do not cease CPR for more than 5 seconds, except for a maximum of 30 seconds to intubate or move the patient until the patient has been stabilized, or until authorized by Medical Control to do so.
2. Check the pulse. Follow the *PEA* protocol only if the pulse is absent.
3. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
4. Intubate with an endotracheal tube or esophageal obturator airway, following the *ET* or *EOA* protocol.
 - 4.1 Whenever possible, hyperventilate the patient using high-concentration **OXYGEN**.
5. Start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution to run at KVO rate for routine cardiac arrest.
 - 5.1 Adult patients: administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (20–30 mL/hour), or “wide open” if hypovolemia is suspected.

Quick Reference

CPR

Recheck pulse

Monitor ECG

Intubate

*Hyperventilate
High conc O₂*

IV: NS or LR

*Adult:
20–30 mL/hr*

*Pedi:
10–20 mL/hr*



- 5.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (10–20 mL/hour); or administer boluses of 20 mL/kg by rapid IV push if hypovolemia is suspected.

- 5.3 If unable to establish IV in ≤2 attempts (<5 minutes) continue CPR and transport the patient to a HOSPITAL EMERGENCY FACILITY immediately. Any further attempt at IV placement must occur en route.

6. Administer **EPINEPHRINE** as indicated below:*Epinephrine*

- 6.1 Adult patients: administer **EPINEPHRINE 1:10,000** 1.0 mg IV push. Repeat every 3–5 minutes if PEA persists.

6.1.1 At any time after first dose of **EPINEPHRINE**, ALS personnel may contact Medical Control for authorization to administer **EPINEPHRINE 1:1,000** 2.0–5.0 mg IV push every 3–5 minutes if PEA persists.

6.1.2 If unable to establish an IV, administer **EPINEPHRINE 1:1,000** 2.0–2.5 mg diluted in 10 mL **NORMAL SALINE** by endotracheal tube. Repeat every 3–5 minutes if PEA persists.



- 6.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **EPINEPHRINE** as indicated on Broselow® Tape, and repeat every 3–5 minutes as necessary:

Epinephrine, per Broselow® Tape

6.2.1 First dose (IV push): **EPINEPHRINE 1:10,000** 0.01 mg/kg (0.1 mL/kg).

6.2.2 Additional doses (IV push): **EPINEPHRINE 1:1,000** 0.1 mg/kg (0.1 mL/kg).

6.2.2.1 At any time after first dose of **EPINEPHRINE**, ALS personnel may contact Medical Control for authorization to administer additional doses of **EPINEPHRINE 1:1,000** up to 0.2 mg/kg (0.2 mL/kg) IV push.

6.2.3 Endotracheal doses: **EPINEPHRINE 1:1,000** 0.1 mg/kg (0.1 mL/kg), diluted to 3–5 mL with **NORMAL SALINE**.

7. If PEA involves a bradycardic rhythm, administer **ATROPINE SULFATE** as indicated below:*? Slow rate:
Atropine*

- 7.1 Adult patients: administer **ATROPINE SULFATE** 1.0 mg IV push. Repeat every 3–5 minutes if PEA with slow ventricular rate persists, to a maximum of 3.0 mg.

7.1.1 If unable to establish an IV, administer **ATROPINE SULFATE** 1–2 mg diluted in 10 mL **NORMAL SALINE** by endotracheal tube. Repeat every 3–5 minutes if PEA with slow ventricular rate persists, to a maximum of 3.0 mg.



- 7.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **ATROPINE SULFATE** as indicated on Broselow® Tape: 0.02 mg/kg IV push (minimum dose: 0.1 mg). Repeat every 3–5 minutes if PEA with slow ventricular rate persists, to a maximum of 1.0 mg (child), 2.0 mg (adolescent).

*Atropine per
Broselow® Tape*

- 7.2.1 If unable to establish an IV, administer **ATROPINE SULFATE** 0.05 mg/kg diluted to 3–5 mL with **NORMAL SALINE** by endotracheal tube. Repeat every 3–5 minutes if PEA with slow ventricular rate persists, to a maximum of 1.0 mg (child), 2.0 mg (adolescent).

8. If ventricular fibrillation occurs, follow *Ventricular Fibrillation* protocol.

9. **EMT-Ps only:** If PEA persists, may perform pleural decompression.

(Pleural decomp)

10. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.

Transport

11. Contact Medical Control.

Med Control

- 11.1 Adult patients: Medical Control may authorize administration of **EPINEPHRINE 1:1000** 2.0–5.0 mg IV push, every 3–5 minutes.

(Epinephrine)



- 11.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): Medical Control may authorize administration of additional doses of **EPINEPHRINE 1:1,000** up to 0.2 mg/kg (0.2 mL/kg) IV push every 3–5 minutes.

(Epinephrine)

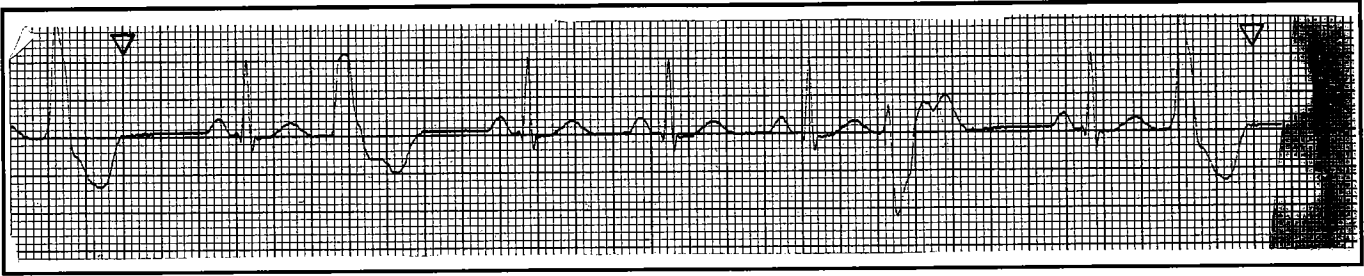
- 11.3 For certain conditions, Medical Control may authorize administration of **SODIUM BICARBONATE** 1 mEq/kg IV push, followed by 0.5 mEq/kg IV push every 10 minutes.

*(Sodium
Bicarbonate)*

12. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Document

Premature Ventricular Complexes (PVCs) [ALS]



RECOGNITION

Frequent PVCs (>6 per minute) with chest pain; dyspnea; decreased level of consciousness; hypotension; shock; or CHF in a suspected cardiac patient.

TREATMENT

1. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
2. Loosen tight clothing and allow the patient to sit in a comfortable position unless hypotensive.
3. Administer **OXYGEN** with the highest-concentration device tolerated.
4. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
5. Start an IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution:
 - 5.1 Adult patients: administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (20–30 mL/hour), or "wide open" if there is evidence of shock.

Quick Reference

Physical Exam & Vital Signs

Patient comfort

High conc O₂

Monitor ECG

IV: NS or LR



- 5.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (10–20 mL/hour); or administer boluses of 20 mL/kg by rapid IV push if there is evidence of shock.

- 5.3 If unable to establish IV in ≤2 attempts, (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.

6. Administer **LIDOCAINE HCl** as indicated below:

- 6.1 Administer **LIDOCAINE HCl** 1.0–1.5 mg/kg IV push.

7. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.

Lidocaine

Transport

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 8. Repeat LIDOCAINE HCl at 10 minute intervals at 0.5–0.75 mg/kg. Maximum total dose: 3 mg/kg. | Repeat lidocaine |
| 8.1 EMT-Ps only: may administer LIDOCAINE HCl infusion at 30–50 mcg/kg/minute.(2–4 mg/min). | (Lido drip) |
| 9. <u>Contact Medical Control.</u> | Med Control |
| 9.1 With authorization from Medical Control, EMT-Cs may administer LIDOCAINE HCl infusion at 30–50 mcg/kg/minute.(2–4 mg/min). | (Lido drip) |
| 10. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> . | Document |

Supraventricular Tachycardia (SVT) [ALS]

Flowchart

Adult Patient, Conscious with Stable Vital Signs

Assess patient and obtain initial VS
Reassess frequently

High-concentration O₂

Monitor and document ECG

IV: NS or LR

ADENOSINE

Contact Medical Control

EMT-Ps only, per Med Control: VERAPAMIL HCL or DILTIAZEM

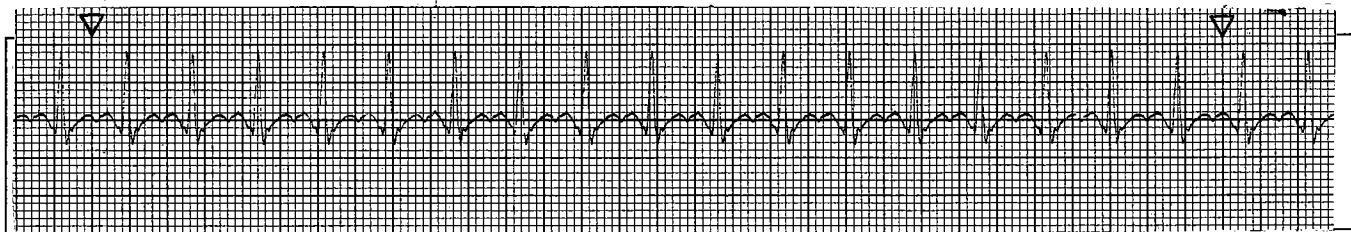
Transport to hospital ED

Document

Supraventricular Tachycardia (SVT) [ALS]

Patient Conscious, with Stable Vital Signs

For pediatric patients <5 feet tall (<35 kg/75 lbs), follow SVT (Pediatric) protocol.



RECOGNITION

Conscious patient with heart rate of 140–220 beats per minute; QRS width <0.12 seconds.

Note: If the QRS width >0.12 seconds, consider **ventricular tachycardia**.

TREATMENT

1. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
2. Loosen tight clothing and allow the patient to sit in a comfortable position unless hypotensive.
3. Administer **OXYGEN** with the highest-concentration device tolerated.
4. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
5. Encourage the patient to perform vagal maneuvers (eg: bearing down, etc.).
6. Start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution to run at KVO rate (20–30 mL/hour).
 - 6.1 If unable to establish an IV in 2 attempts (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.
7. Administer **ADENOSINE** (Adenocard®) as indicated below:
 - 7.1 Administer **ADENOSINE** 6 mg, rapid IV push (over 1–3 seconds), followed by rapid flush with 20 mL **NORMAL SALINE** or **LACTATED RINGER'S** solution.
 - 7.2 If 6 mg dose does not convert rhythm within 1–2 minutes, administer **ADENOSINE** 12 mg, rapid IV push (over 1–3 seconds), followed by rapid flush with 20 mL **NORMAL SALINE** or **LACTATED RINGER'S** solution. If 12 mg dose does not convert rhythm, repeat once in 1–2 minutes.

Quick Reference

*Physical Exam
& Vital Signs*

Patient comfort

High conc O₂

Monitor ECG

*Vagal
maneuvers*

IV: NS or LR

Adenosine

8. Contact Medical Control.

Med Control

- 8.1 **EMT-Ps only:** Administer **VERAPAMIL HCl** (Calan®, Isoptin®) or **DILTIAZEM** (Cardizem®) as indicated below:

(Verapamil)
(Diltiazem)

8.1.1 Administer **VERAPAMIL HCL** 2.5–5.0 mg IV over 1–2 minutes. If this dose does not convert rhythm within 15 minutes, repeat **VERAPAMIL HCL** 5.0–10.0 mg IV over 1–2 minutes or

8.1.2 Administer **DILTIAZEM** 10-20mg IV over 2 minutes. If this does not slow or convert rhythm within 15 minutes, repeat **DILTIAZEM** 10-20mg IV over 2 minutes.

8.1.3 If, following dose of **VERAPAMIL** or **DILTIAZEM** the patient's systolic blood pressure drops below 100mgHG, administer **CALCIUM CHLORIDE** 500mg IV slowly.

(Calcium
Chloride)

9. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.

Transport

10. Document all incident information by completing the RI EMS Ambulance Run Report.

Document

Supraventricular Tachycardia (SVT) [ALS]

Flowchart

Adult Patient, Unconscious or with Unstable Vital Signs

Assess patient and obtain initial VS; reassess frequently

High-concentration O₂

Monitor and document ECG

(Consider sedation; contact Med Control)
Synchronized cardioversion

IV: NS or LR

ADENOSINE

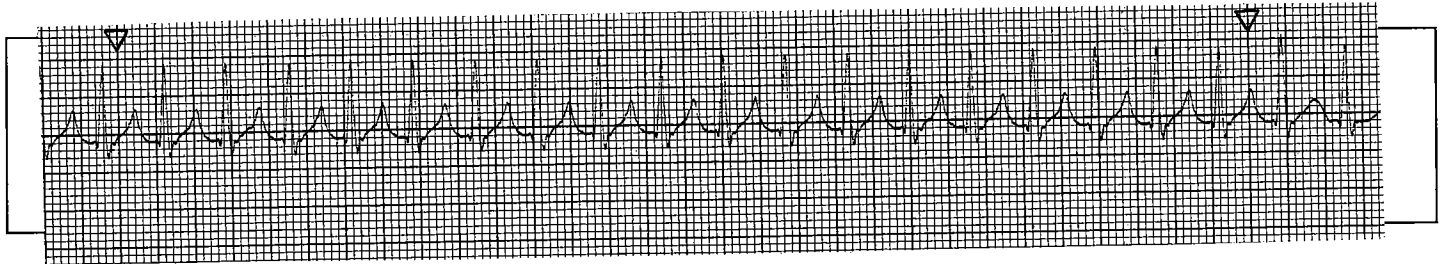
Contact Medical Control

EMT-Ps only, per Med Control: VERAPAMIL HCl or DILTIAZEM

Transport to hospital ED

Document

Supraventricular Tachycardia (SVT) [ALS]

*Patient Unconscious, or with Unstable Vital Signs***For pediatric patients <5 feet tall (<35 kg/75 lbs), follow SVT (Pediatric) protocol.****RECOGNITION**

Patient with heart rate of 140–220 beats per minute; QRS width <0.12 second:
NOTE: If the QRS width >0.12 seconds, consider **ventricular tachycardia**.

TREATMENT

1. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
2. Loosen tight clothing and allow the patient to sit in a comfortable position (position supine if hypotensive).
3. Administer **OXYGEN** with the highest-concentration device tolerated.
4. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
5. Attempt to cardiovert the patient, as indicated below:
 - 5.1 For conscious patients, consider contacting Medical Control for authorization to administer sedative and/or analgesic, following the *Pain Management and Sedation* protocol.
 - 5.2 Record initial ECG rhythm and attempted cardioversions; attach copies of the rhythm strips to the hospital copy of the *RI EMS Ambulance Run Report*, as part of required documentation.
 - 5.3 Attempt synchronized cardioversion at **50 joules**. If unsuccessful, may repeat at increasing energy levels: **100 joules; 200 joules; 300 joules; 360 joules** (or maximum energy).
6. Start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution to run at KVO rate (20–30 mL/hour).
 - 6.1 If unable to establish an IV in 2 attempts (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.

Quick Reference*Physical Exam & Vital Signs**Patient comfort**High conc O₂**Monitor ECG**Cardiovert**(Sedation)**Record ECG during attempt**Synch. shocks
50-100-200-300-360 J**IV: NS or LR*

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <p>7. Administer ADENOSINE (Adenocard®) as indicated below:</p> <p>7.1 Administer ADENOSINE 6 mg, <u>rapid</u> IV push (over 1–3 seconds), followed by rapid flush with 20 mL NORMAL SALINE or LACTATED RINGER'S solution.</p> <p>7.2 If 6 mg dose does not convert rhythm within 1–2 minutes, administer ADENOSINE 12 mg, <u>rapid</u> IV push (over 1–3 seconds), followed by rapid flush with 20 mL NORMAL SALINE or LACTATED RINGER'S solution. If 12 mg dose does not convert rhythm, repeat once in 1–2 minutes.</p> | <p>(Adenosine)</p> |
| <p>8. <u>Contact Medical Control.</u></p> <p>8.1 EMT-Ps only: With authorization from Medical Control, administer VERAPAMIL HCl (Calan®, Isoptin®) or DILTIAZEM (Cardizem®) as indicated below:</p> <p>8.1.1 Administer VERAPAMIL HCL 2.5–5.0 mg IV over 1–2 minutes. If this dose does not convert rhythm within 15 minutes, repeat VERAPAMIL HCL 5.0–10.0 mg IV over 1–2 minutes or</p> <p>8.1.2 Administer DILTIAZEM 10-20mg IV over 2 minutes. If this does not slow or convert rhythm within 15 minutes, repeat DILTIAZEM 10-20mg IV over 2 minutes.</p> <p>8.1.3 If, following dose of VERAPAMIL or DILTIAZEM the patient's systolic blood pressure drops below 100mgHG, administer CALCIUM CHLORIDE 500mg IV slowly.</p> | <p>Med Control</p> <p>(Verapamil)
(Diltiazem)</p> <p>(Calcium Chloride)</p> |
| <p>9. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u>.</p> | <p>Transport</p> |
| <p>10. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i>.</p> | <p>Document</p> |



Supraventricular Tachycardia (SVT) (Pediatric) [ALS]

Flowchart

Stable Pediatric Patient Without Impaired Consciousness, Respiratory Distress, or Shock

Assess patient; obtain initial VS



High-concentration O₂



Monitor and document ECG



Vagal maneuvers



IV: NS or LR



Contact Medical Control



Per Med Control, **ADENOSINE**



Transport to hospital ED

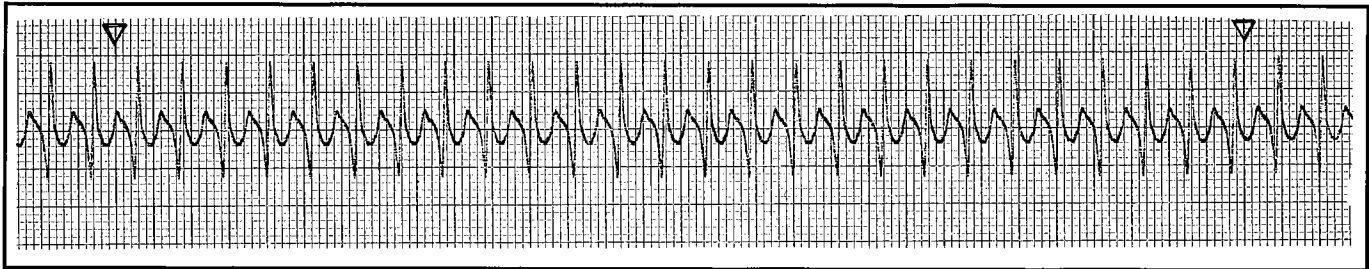


Document



Supraventricular Tachycardia (SVT) (Pediatric) [ALS]

Stable Patient without Impaired Consciousness, Respiratory Distress, or Shock



RECOGNITION

1. Clinical Indicators:
 - 1.1 Infant: Poor feeding, diaphoresis, irritability.
 - 1.2 Child: Rapid heart rate, fatigue, exercise intolerance.
2. ECG Recognition:
 - 2.1 If narrow complex tachycardia with regular and consistent rate >230 /minute, suspect **SVT**.
 - 2.2 If narrow complex tachycardia with varied rate <200 /minute, suspect **sinus tachycardia**, and evaluate carefully for evidence of hypovolemic shock.

TREATMENT

1. Perform a rapid exam, including assessment of the following:
 - (a) level of consciousness/responsiveness, airway maintenance
 - (b) respiratory rate and effort, skin/mucous membrane color
 - (c) heart rate, distal pulses, temperature, capillary refill, BP
2. Administer **OXYGEN** with the highest-concentration device tolerated.
3. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
4. Attempt the following vagal maneuvers:
 - 4.1 application of ice or ice-water to patient's face
 - 4.2 coaching the patient through Valsalva's maneuver
5. If SVT persists:
 - 5.1 Start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution to run at KVO rate (10–20 mL/hour).
 - 5.1.1 If unable to establish an IV in ≤ 2 attempts (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.

Quick Reference

Rapid Exam

High conc O₂

Monitor ECG

IV: NS or LR

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>6. <u>Contact Medical Control</u>, for authorization to administer ADENOSINE:</p> <p>6.1 Administer ADENOSINE (Adenocard®) 0.1 mg/kg (maximum first dose: 6 mg), <u>rapid</u> IV push (over 1–3 seconds), followed by a rapid flush with 2–3 mL of NORMAL SALINE or LACTATED RINGER'S solution.</p> <p>6.2 If 0.1 mg/kg dose does not convert rhythm within 1–2 minutes, administer ADENOSINE 0.2 mg/kg (maximum dose: 12 mg), <u>rapid</u> IV push (over 1–3 seconds), followed by a rapid flush with 2–3 mL of NORMAL SALINE or LACTATED RINGER'S solution. If this dose does not convert rhythm, repeat once in 1–2 minutes.</p> <p>7. If there is evidence of shock, follow the <i>Shock</i> protocol.</p> <p>8. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u>.</p> <p>9. Document the encounter by completing the <i>RI EMS Ambulance Run Report</i>.</p> | <p><i>Med Control</i>
<i>(Adenosine)</i></p>

<p><i>Treat shock</i></p> <p><i>Transport</i></p> <p><i>Document</i></p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|



Supraventricular Tachycardia (SVT) (Pediatric) [ALS]

Flowchart

Unstable Pediatric Patient: Impaired Consciousness; Respiratory Distress; or Shock

Assess patient; obtain initial VS
Treat shock, following *Shock* protocol



High-concentration O₂
Assist with BVM
Endotracheal intubation



Monitor and document ECG



(Consider sedation: Contact Medical Control)
Synchronized cardioversion



IV: NS or LR



Treat shock, following *Shock* protocol



Contact Medical Control



Per Med Control: **ADENOSINE**



Transport to hospital ED

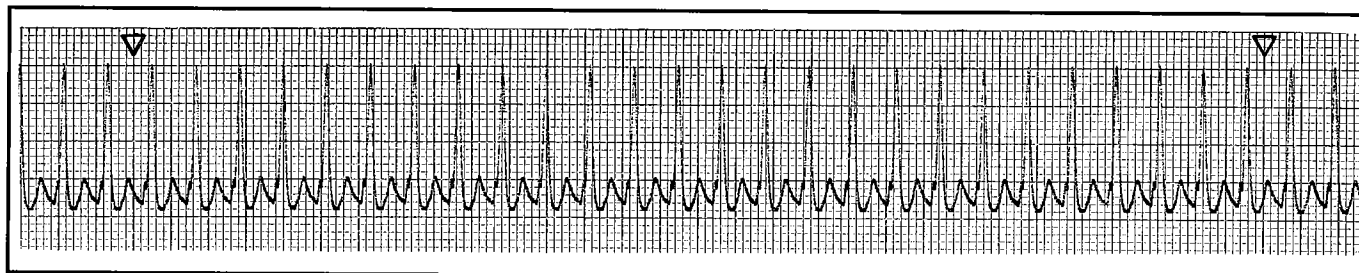


Document



Supraventricular Tachycardia (SVT) (Pediatric) [ALS]

Unstable Patient, with Impaired Consciousness; Respiratory Distress; or Shock



RECOGNITION

1. Clinical Indicators:

- 1.1 Infant: Poor feeding; diaphoresis; irritability; respiratory distress; impaired consciousness; CHF; evidence of shock.
- 1.2 Child: Rapid heart rate; fatigue; exercise intolerance; impaired consciousness; syncope; respiratory distress; CHF; evidence of shock.

2. ECG Recognition:

- 2.1 If narrow complex tachycardia with regular and consistent rate >230/minute, suspect **SVT**.
- 2.2 If narrow complex tachycardia with varied rate <200/minute, suspect **sinus tachycardia**, and evaluate carefully for evidence of hypovolemic shock.

TREATMENT

1. Perform a rapid exam, including assessment of the following:

- (a) level of consciousness/responsiveness, airway maintenance
- (b) respiratory rate and effort, skin/mucous membrane color
- (c) heart rate, distal pulses, temperature, capillary refill, BP

2. Administer **OXYGEN** with the highest-concentration device tolerated.

- 2.1 Children with impaired consciousness, cyanosis, respiratory distress, or evidence of shock require assisted ventilations with high-concentration **OXYGEN** and airway adjuncts.

- 2.1.1 **EMT-Ps only:** perform endotracheal intubation, as indicated in the *Airway Management and Respiratory Support* protocol.

3. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.

Quick Reference

Rapid Exam

High conc O₂

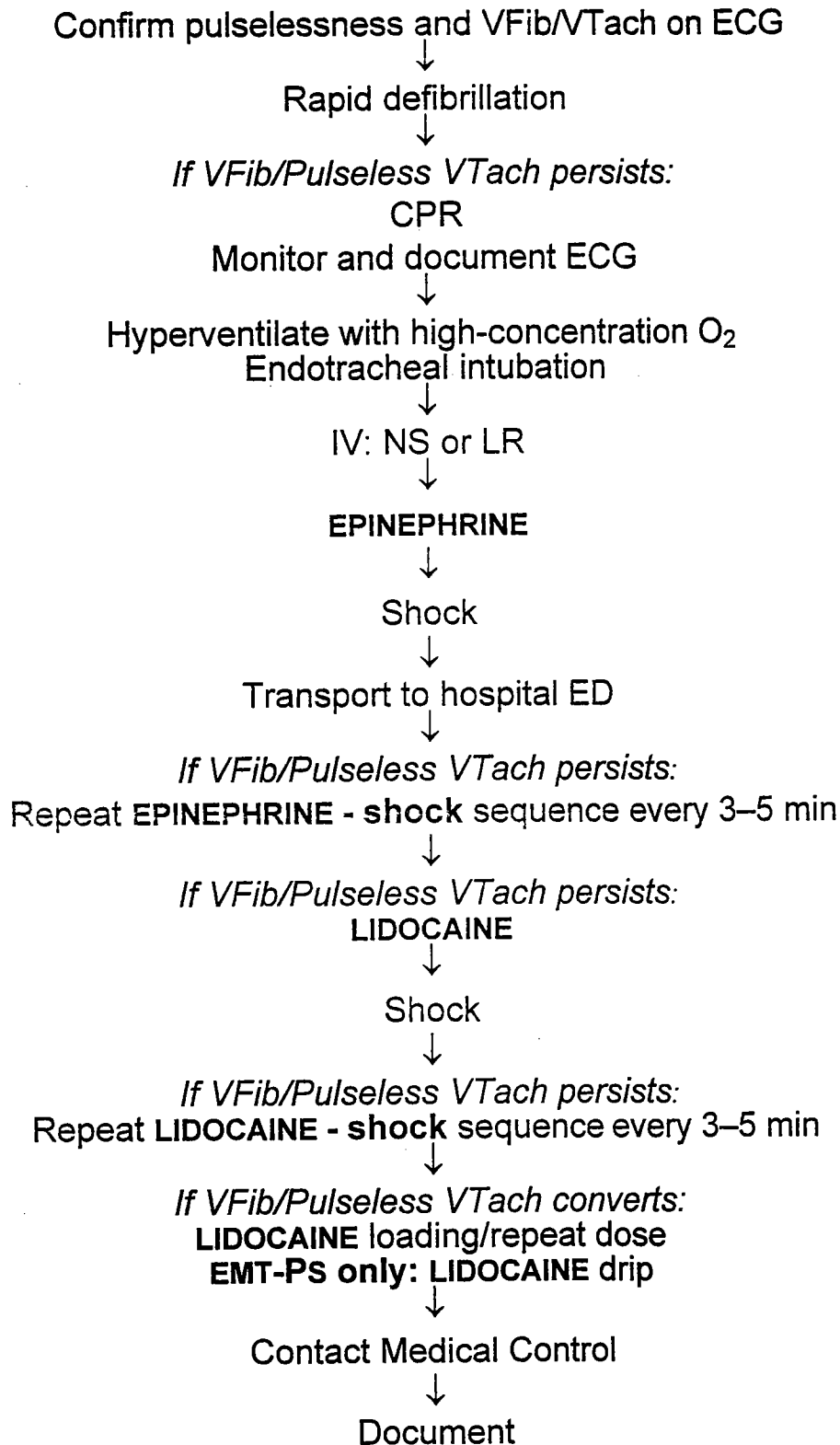
*BVM with
High flow O₂*

(ET Intubation)

Monitor ECG

- | | |
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| <ol style="list-style-type: none"> 5. Attempt synchronized cardioversion at 0.25–0.5 joule/kg. If unsuccessful, may repeat at 0.5–1.0 joule/kg. <ol style="list-style-type: none"> 5.1 For patients who are conscious, consider contacting Medical Control for authorization to administer sedative and/or analgesic, following the <i>Pain Management and Sedation</i> protocol. 5.2 Record ECG during attempted cardioversions, and attach copies of the rhythm strips to the hospital copy of the <i>RI EMS Ambulance Run Report</i>, as part of required documentation. 6. Start at least one IV of NORMAL SALINE or LACTATED RINGER'S solution to run at KVO rate (10–20 mL/hour). <ol style="list-style-type: none"> 6.1 If unable to establish an IV in ≤ 2 attempts (<5 minutes) transport the patient to a <u>HOSPITAL EMERGENCY FACILITY</u>. Any further attempt at IV placement must occur en route. 7. If there is evidence of shock, follow the <i>Shock</i> protocol. 8. <u>Contact Medical Control</u> for authorization to administer ADENOSINE. <ol style="list-style-type: none"> 8.1 Administer ADENOSINE (Adenocard®) 0.1 mg/kg (maximum first dose: 6 mg), <u>rapid</u> IV push (over 1–3 seconds), followed by a rapid flush with 2–3 mL of NORMAL SALINE or LACTATED RINGER'S solution. 8.2 If 0.1 mg/kg dose does not convert rhythm within 1–2 minutes, administer ADENOSINE 0.2 mg/kg (maximum dose: 12 mg), <u>rapid</u> IV push (over 1–3 seconds), followed by a rapid flush with 2–3 mL of NORMAL SALINE or LACTATED RINGER'S solution. If this dose does not convert rhythm, repeat once in 1–2 minutes. 9. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u>. 10. Document the encounter by completing the <i>RI EMS Ambulance Run Report</i>. | <p><i>Synchronized Cardioversion</i></p>
<p><i>Record ECG</i></p>
<p><i>IV: NS or LR</i></p>
<p><i>Treat shock</i></p> <p><i>Med Control</i>
<i>(Adenosine)</i></p>
<p><i>Transport</i></p> <p><i>Document</i></p> |
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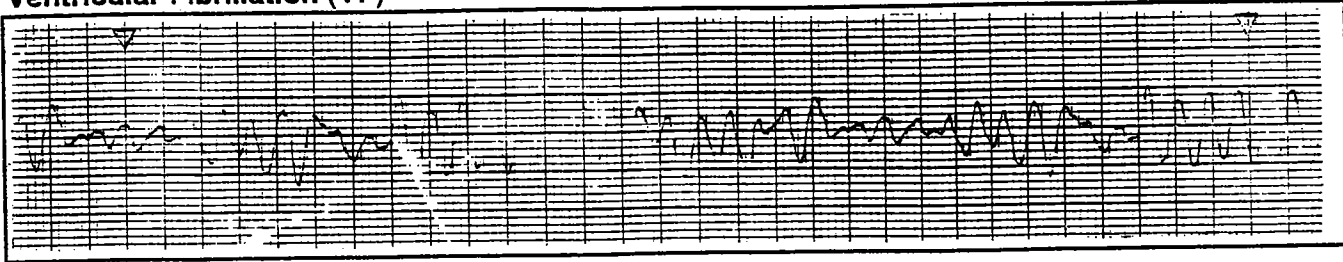
Ventricular Fibrillation (VF) and Pulseless Ventricular Tachycardia (VT) [ALS] Flowchart



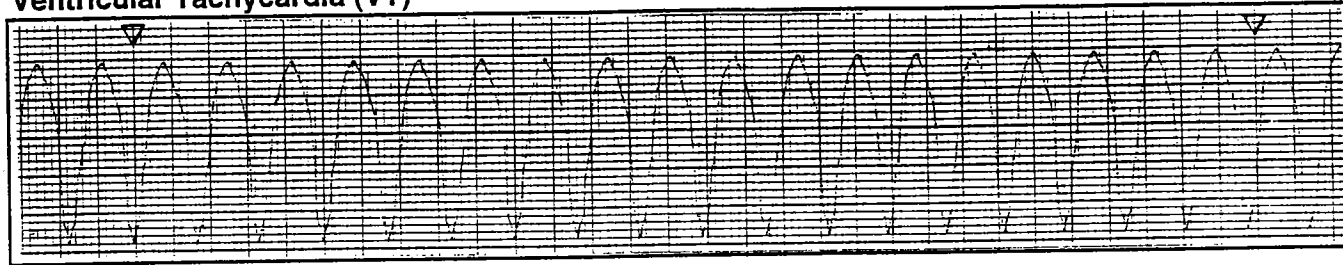
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Revised: 1 Jan 96; 15 Oct 97
1 Oct. 99

Ventricular Fibrillation (VF) and Pulseless Ventricular Tachycardia (VT) [ALS]

Ventricular Fibrillation (VF)



Ventricular Tachycardia (VT)



RECOGNITION

Unconscious, pulseless patient with **ventricular fibrillation (VF)** or **ventricular tachycardia (VT)** on ECG.

TREATMENT

1. Check the pulse. Follow the *VF/Pulseless VT* protocol only if the pulse is absent.
2. Confirm VF/VT on monitor/defibrillator.
 - 2.1 Immediately apply "quick-look" paddles or "hands-free" electrodes. Use "pedi" (ie: infant-size) paddles **only** for patients <10 kg (25 lbs, ~1 year of age). **Use standard paddles for all patients ≥10 kg.**
 - 2.2 Identify VF or VT. Changing the location of the electrodes may reveal VF that at first appears to be asystole.
 - 2.3 Record initial ECG rhythm and attempted defibrillations; attach copies of the rhythm strips to the hospital copy of the *RI EMS Ambulance Run Report*, as part of required documentation.
3. Attempt to defibrillate/cardiovert.
 - 3.1 Adult patients:
 - 3.1.1 Shock at **200 joules**.
 - 3.1.2 Check pulse and identify rhythm. If VF/VT persists, re-shock at **300 joules**.
 - 3.1.3 Check pulse and identify rhythm. If VF/VT persists, re-shock at **360 joules** (maximum energy).

Quick Reference

Recheck pulse

Confirm VF/VT

*Apply defib
electrodes*

R/O asystole

*Record ECG
during shocks*

≤3 Shocks

Adult:

200 J

300 J

360 J

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3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): Shock as indicated on Broselow® Tape:

3.2.1 Shock at **2 joules/kg** (1 joule/lb).

3.2.2 Check pulse and identify rhythm. If VF/VT persists, re-shock at **4 joules/kg** (2 joules/lb).

3.2.3 Check pulse and identify rhythm. If VF/VT persists, re-shock at **4 joules/kg** (2 joules/lb).

Pedi: Shock per Broselow® Tape

2 J/kg

4 J/kg

4 J/kg

4. Re-evaluate the patient and interpret the ECG.

4.1 If VF/VT is converted to a perfusing rhythm or another dysrhythmia, follow all appropriate protocols.

4.2 If VF/VT persists, continue treatment as indicated below.

5. Begin the Basic Life Support (CPR) sequence of the American Heart Association or the American Red Cross.

5.1 Do not cease CPR for more than 5 seconds, except for a maximum of 30 seconds to intubate or move the patient, until the patient has been stabilized, or until authorized by Medical Control to do so.

6. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.

7. Intubate with an endotracheal tube or esophageal obturator airway, following the *ET* or *EOA* protocol.

7.1 Whenever possible, hyperventilate the patient using high-concentration oxygen.

8. Start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution to run at KVO rate, as indicated below:

8.1 Adult patients: administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (20–30 mL/hour).

Reassess

CPR

Monitor ECG

Intubate

*Hyperventilate
high conc O₂*

IV: NS or LR



8.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (10–20 mL/hour).

8.3 If unable to establish an IV in ≤2 attempts (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.

9. Administer **EPINEPHRINE** and **shock** as indicated below:*Epi - shock*

9.1 Adult patients: administer **EPINEPHRINE 1:10,000** 1.0 mg IV push. Repeat every 3–5 minutes if VF/pulseless VT persists.

Epi

9.1.1 At any time after first dose of **EPINEPHRINE**, ALS personnel may contact Medical Control for authorization to administer **EPINEPHRINE 1:1,000** 2.0–5.0 mg IV push every 3–5 minutes if VF/pulseless VT persists.

9.1.2 If unable to establish an IV, administer **EPINEPHRINE 1:1,000** 2.0–2.5 mg diluted in 10 mL **NORMAL SALINE** by endotracheal tube. Repeat every 3–5 minutes if VF/pulseless VT persists.



9.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **EPINEPHRINE** as indicated on Broselow® Tape, and repeat every 3–5 minutes as necessary:

Epinephrine, per Broselow® Tape

9.2.1 First dose (IV push): **EPINEPHRINE 1:10,000** 0.01 mg/kg (0.1 mL/kg).

9.2.2 Additional doses (IV push): **EPINEPHRINE 1:1,000** 0.1 mg/kg (0.1 mL/kg).

9.2.2.1 At any time after first dose of **EPINEPHRINE**, ALS personnel may contact Medical Control for authorization to administer additional doses of **EPINEPHRINE 1:1,000** up to 0.2 mg/kg (0.2 mL/kg) IV push.

9.2.3 Endotracheal doses: **EPINEPHRINE 1:1,000** 0.1 mg/kg (0.1 mL/kg), diluted to 3–5 mL with **NORMAL SALINE**.

9.3 Attempt to defibrillate/cardiovert, within 30–60 seconds of **EPINEPHRINE**:

Shock

9.3.1 Adult patients: shock at **360 joules** (or maximum energy).



9.3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): shock as indicated on Broselow® Tape: **4 joules/kg** (2 joules/lb).

Shock, per Broselow® Tape

10. Transport the patient without delay to the nearest HOSPITAL EMERGENCY FACILITY.

Transport

11. If VF/VT persists, continue sequence **EPINEPHRINE - shock** every 3–5 minutes (in addition to other medications that may be given), as indicated below:

Epi - Shock every 3–5 min.

11.1 Adult patients: administer **EPINEPHRINE 1:10,000** 1.0 mg IV push.

Epi

11.1.1 ALS personnel may contact Medical Control for authorization to administer **EPINEPHRINE 1:1,000** 2.0–5.0 mg IV push every 3–5 minutes if VF/pulseless VT persists.

11.1.2 If unable to establish an IV, administer **EPINEPHRINE 1:1,000** 2.0–2.5 mg diluted in 10 mL **NORMAL SALINE** by endotracheal tube.

Effective: 1 July 1995
Revised: 1 Jan 96; 15 Oct 97
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11.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **EPINEPHRINE 1:1,000** as indicated on Broselow® Tape: 0.1 mg/kg (0.1 mL/kg) IV push.

Epinephrine per Broselow® Tape

11.2.1 ALS personnel may contact Medical Control for authorization to administer additional doses of **EPINEPHRINE 1:1,000** up to 0.2 mg/kg (0.2 mL/kg) IV push.

11.2.2 If unable to establish an IV, administer **EPINEPHRINE 1:1,000** 0.1 mg/kg (0.1 mL/kg), diluted to 3–5 mL with **NORMAL SALINE** by endotracheal tube.

11.3. Attempt to defibrillate/cardiovert, within 30–60 seconds of **EPINEPHRINE**:

Shock

11.3.1 Adult patients: shock at **360 joules** (or maximum energy).



11.3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): shock as indicated on Broselow® Tape: **4 joules/kg** (2 joules/lb).

Shock per Broselow® Tape

12. If VF/VT persists: administer **LIDOCAINE** and **shock**, as indicated below:

Lido - shock

12.1 Administer **LIDOCAINE HCl** 1.0–1.5 mg/kg IV push (or 2.0–3.75 mg/kg by endotracheal tube, followed by **NORMAL SALINE** flush).

Lidocaine

12.2. Attempt to defibrillate/cardiovert, within 30–60 seconds of **LIDOCAINE**:

Shock

12.2.1 Adult patients: shock at **360 joules** (or maximum energy).



12.2.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): shock as indicated on Broselow® Tape: **4 joules/kg** (2 joules/lb).

Shock per Broselow® Tape

13. If VF/VT persists, repeat sequence **LIDOCAINE - shock** every 3–5 minutes x 2, to a maximum total of 3 mg/kg:

Lido Shock every 3–5 min.

13.1 Administer **LIDOCAINE HCl** 1.0–1.5 mg/kg IV push (or 2.0–3.75 mg/kg by endotracheal tube, followed by **NORMAL SALINE** flush).

Loading dose

13.1.1 For patients >70 years, or those with liver failure, use one-half dose.

(Reduced dose)

13.2 Attempt to defibrillate/cardiovert, within 30–60 seconds of **LIDOCAINE**:

Shock

13.2.1 Adult patients: shock at **360 joules** (or maximum energy).



13.2.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): shock as indicated on Broselow® Tape: **4 joules/kg** (2 joules/lb).

Shock per Broselow® Tape

Effective: 1 July 1995
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| <p>14. If VF/VT is converted to a perfusing rhythm, administer LIDOCAINE HCl as indicated below:</p> <p>14.1 If a loading dose has not been given, administer LIDOCAINE HCl 1.0–1.5 mg/kg IV push (or 2.0–3.75 mg/kg by endotracheal tube, followed by NORMAL SALINE flush).</p> <p>14.2 If a loading dose has been given, administer LIDOCAINE HCl 0.5–0.75 mg/kg IV push (or 1.0–1.5 mg/kg by endotracheal tube, followed by NORMAL SALINE flush) every 8–10 minutes, to a maximum of 3 mg/kg.</p> <p>14.3 For patients >70 years, or those with liver failure, use one-half dose.</p> <p>14.4 EMT-Ps only: may perform any or all of the following:</p> <p>14.4.1 If a loading dose has been given, administer LIDOCAINE HCl infusion at 30–50 mcg/kg/minute (2–4 mg/minute), as an alternative or addition to repeat doses.</p> <p>14.4.2 Administer BRETYLIUM TOSYLATE, if available, 5 mg/kg IV push; follow within 30–60 seconds by shock at 360 joules (adult) or 4 joules/kg (2 joules/lb) (pediatric).</p> <p>14.4.3. In 5 minutes, if VF/VT persists, administer BRETYLIUM TOSYLATE, if available, 10 mg/kg IV push, followed within 30–60 seconds by shock at 360 joules (adult) or 4 joules/kg (2 joules/lb) (pediatric).</p> <p>14.4.4 Administer BRETYLIUM TOSYLATE, if available, by IV infusion as indicated below:</p> <p>14.4.4.1 Adult patients: infuse BRETYLIUM TOSYLATE, if available, at 1–2 mg/minute.</p> | <p><i>Lidocaine maintenance</i></p> <p><i>Loading dose</i></p>
<p><i>Repeat dose</i></p>
<p><i>(Reduced dose)</i></p>
<p><i>Lidocaine drip</i></p>
<p><i>(Bretylium-shock)</i></p>
<p><i>(Bretylium drip)</i></p>
<p><i>Med Control</i></p>
<p><i>Lidocaine drip</i></p>
<p><i>(Bretylium-shock)</i></p>
<p><i>(Bretylium drip)</i></p> |
| <p>15. <u>Contact Medical Control.</u> With authorization from Medical Control, EMT-Cs may perform any or all of the following:</p> <p>15.1 If a loading dose has been given, administer LIDOCAINE HCl infusion at 30–50 mcg/kg/minute (2–4 mg/minute), as an alternative or addition to repeat doses.</p> <p>15.2 Administer BRETYLIUM TOSYLATE, if available, 5 mg/kg IV push; follow within 30–60 seconds by shock at 360 joules (adult) or 4 joules/kg (2 joules/lb) (pediatric).</p> <p>15.3 In 5 minutes, if VF/VT persists, administer BRETYLIUM TOSYLATE, if available, 10 mg/kg IV push, followed within 30–60 seconds by shock at 360 joules (adult) or 4 joules/kg (2 joules/lb) (pediatric).</p> <p>15.4 Administer BRETYLIUM TOSYLATE, if available, by IV infusion as indicated below:</p> <p>15.4.1 Adult patients: infuse BRETYLIUM TOSYLATE, if available, at 1–2 mg/minute.</p> | |

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16. Medical Control may authorize any or all of the following:

16.1 Adult patients: Medical Control may authorize administration of **EPINEPHRINE 1:1000** 2.0–5.0 mg IV push, every 3–5 minutes.

(Epinephrine)



16.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): Medical Control may authorize administration of additional doses of **EPINEPHRINE 1:1,000** up to 0.2 mg/kg (0.2 mL/kg) IV push every 3–5 minutes.

(Epinephrine)

16.3 For certain conditions, Medical Control may authorize administration of **SODIUM BICARBONATE** 1 mEq/kg IV push, followed by 0.5 mEq/kg IV push every 10 minutes.

(Sodium
Bicarbonate)

17. If VF/VT is converted to another dysrhythmia, follow all appropriate protocols.

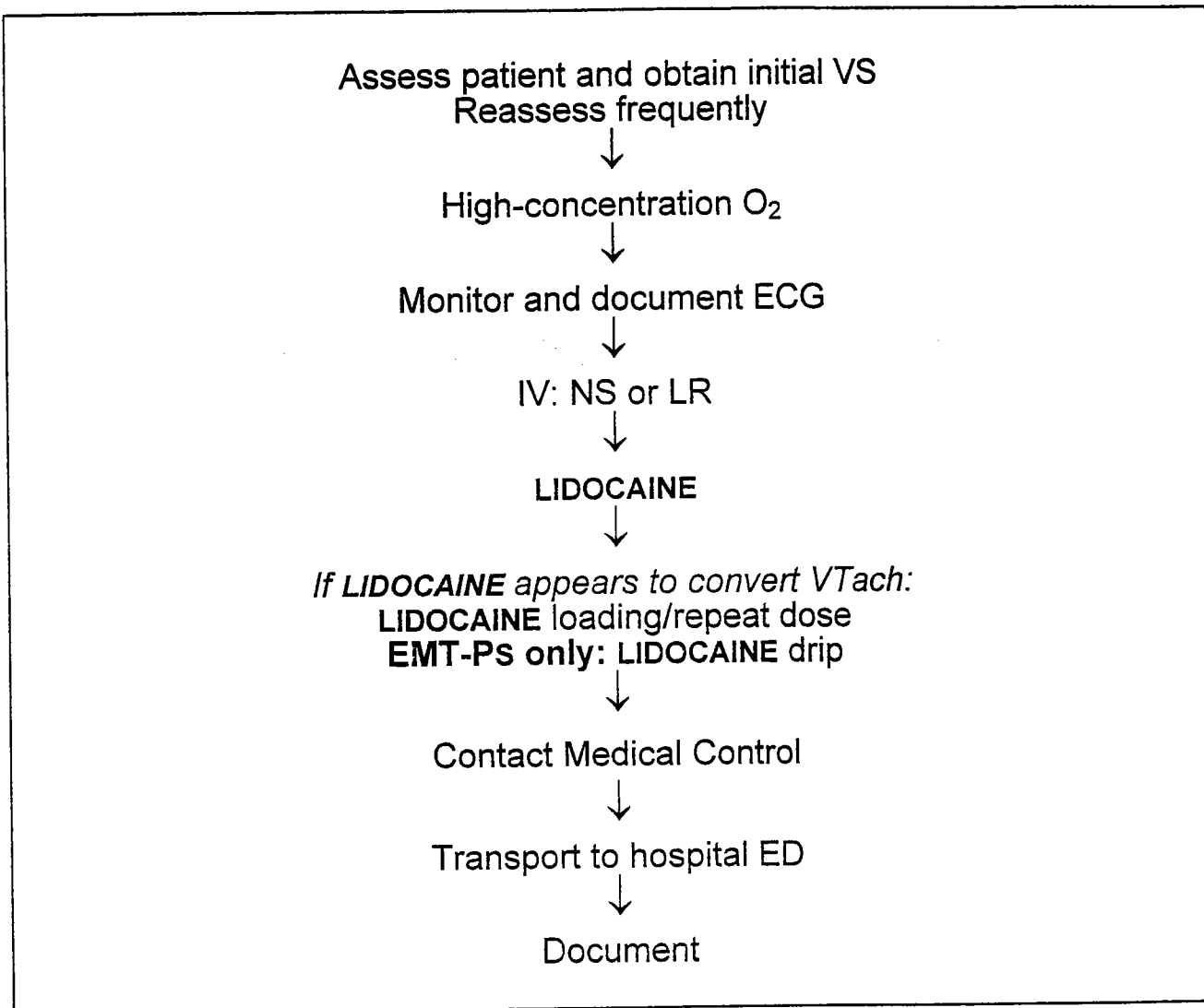
18. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Document

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Revised: 1 Jan 96; 15 Oct 97
1 Oct. 99

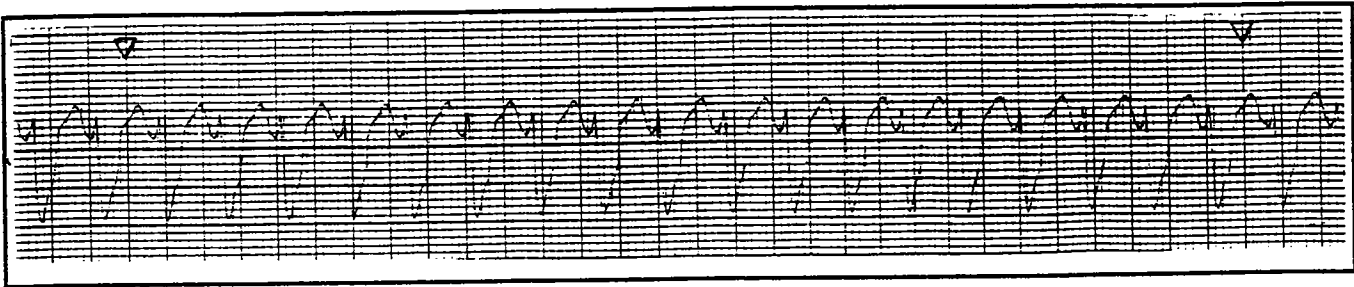
Ventricular Tachycardia (VT) [ALS] Flowchart

Patient Conscious, with Stable Vital Signs



Ventricular Tachycardia (VT) [ALS]

Patient conscious, with stable vital signs



RECOGNITION

Wide-complex tachycardia (ventricular rate usually <150 per minute) on ECG of patient who is conscious, **without** any of the following signs and symptoms: chest pain; dyspnea; decreased level of consciousness; hypotension; shock; or CHF.

TREATMENT

Quick Reference

1. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
2. Loosen tight clothing and allow the patient to sit in a comfortable position unless hypotensive.
3. Administer **OXYGEN** with the highest-concentration device tolerated.
4. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
5. Start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution:
 - 5.1 Adult patients: administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (20–30 mL/hour).

*Physical Exam
& Vital Signs*

Patient comfort

High conc O₂

Monitor ECG

IV: NS or LR



- 5.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (10–20 mL/hour).

- 5.3 If unable to establish an IV in ≤2 attempts (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.

6. Administer **LIDOCAINE HCl** as indicated below:

- 6.1 Administer **LIDOCAINE HCl** 1.0–1.5 mg/kg IV push.
- 6.2 Repeat **LIDOCAINE HCl**, at 0.5–0.75 mg/kg IV push, at 5–10 minute intervals x2.
- 6.3 For patients >70 years, or those with liver failure, use one-half dose.

Lidocaine

Loading dose

Repeat dose

(Reduced dose)

6.4 EMT-Ps only: may perform any or all of the following:

6.4.1 If a loading dose **has** been given, administer **LIDOCAINE HCl** infusion at 30–50 mcg/kg/minute (2–4 mg/minute), as an alternative or addition to repeat doses.

Lidocaine drip

6.4.2 Administer **BRETYLIUM TOSYLATE**, if available, 5 mg/kg slow IV push over 8–10 minutes.

Bretylium

6.4.3. In 5 minutes, if VF/VT persists, administer **BRETYLIUM TOSYLATE**, if available, 10 mg/kg slow IV push over 8–10 minutes.

6.4.4 Administer **BRETYLIUM TOSYLATE**, if available, by IV infusion as indicated below:

Bretylium drip

6.4.4.1 Adult patients: infuse **BRETYLIUM TOSYLATE**, if available, at 1–2 mg/minute.

7. Contact Medical Control.

Med Control

7.1 With authorization from Medical Control, EMT-Cs may perform any or all of the following:

7.1.1 If a loading dose **has** been given, administer **LIDOCAINE HCl** infusion at 30–50 mcg/kg/minute (2–4 mg/minute), as an alternative or addition to repeat doses.

Lidocaine drip

7.1.2 Administer **BRETYLIUM TOSYLATE**, if available, 5 mg/kg slow IV push over 8–10 minutes.

Bretylium

7.1.3 In 5 minutes, if VF/VT persists, administer **BRETYLIUM TOSYLATE**, if available, 10 mg/kg slow IV push over 8–10 minutes.

7.1.4 Administer **BRETYLIUM TOSYLATE**, if available, by IV infusion as indicated below:

Bretylium drip



7.1.4.1 Adult patients: infuse **BRETYLIUM TOSYLATE**, if available, at 1–2 mg/minute.

7.2 With authorization from Medical Control, administer **ADENOSINE** (Adenocard®) as indicated below:

(Adenosine)

7.2.1 Adult patients: administer **ADENOSINE** 6 mg, rapid IV push (over 1–3 seconds), followed by rapid flush with 20 mL **NORMAL SALINE** or **LACTATED RINGER'S** solution.

7.2.1.1 If 6 mg dose does not convert rhythm within 1–2 minutes, administer **ADENOSINE** 12 mg, rapid IV push (over 1–3 seconds), followed by rapid flush with 20 mL **NORMAL SALINE** or **LACTATED RINGER'S** solution. If 12 mg dose does not convert rhythm, repeat once in 1–2 minutes.

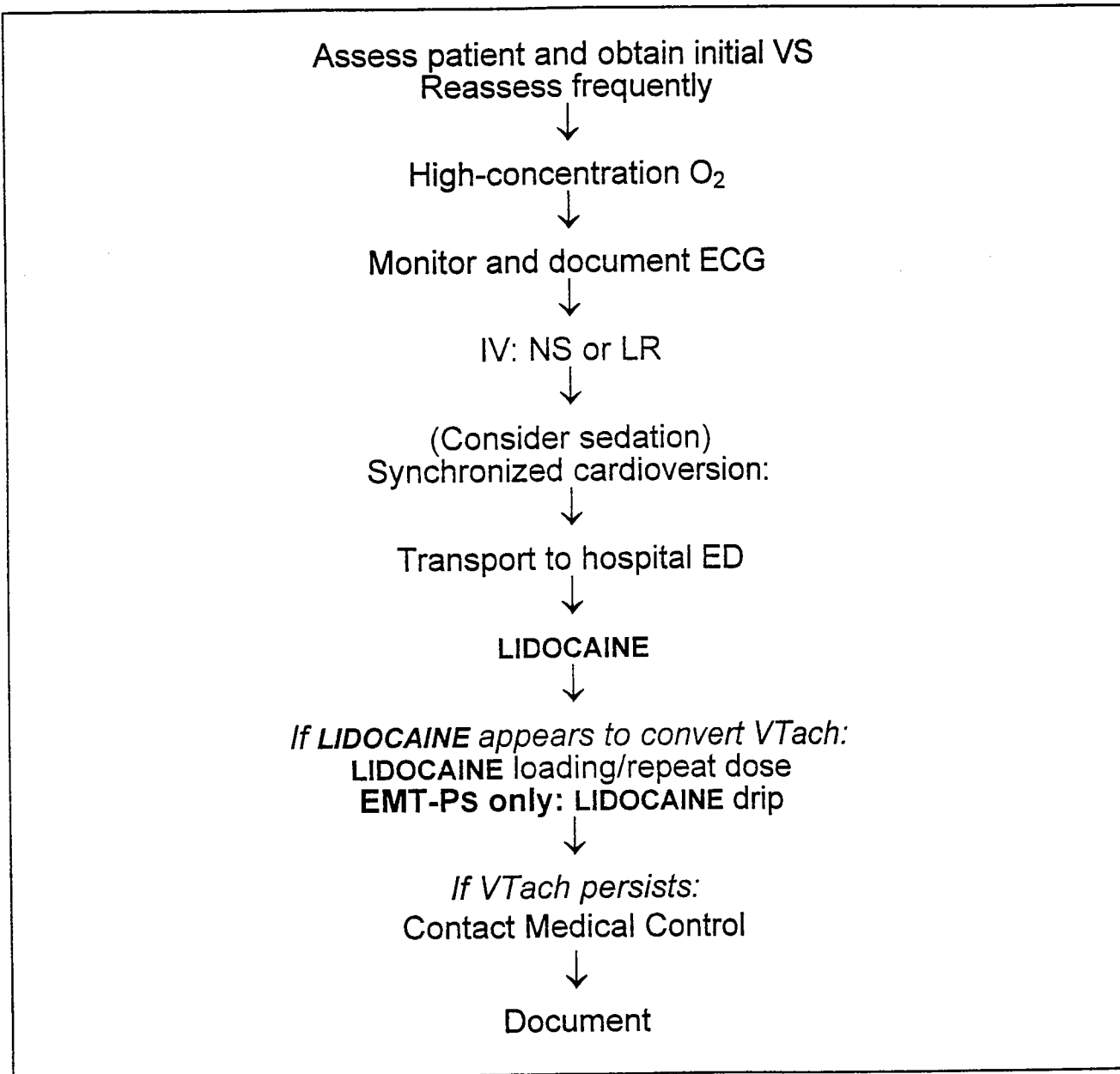
	<p>7.2.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer ADENOSINE (Adenocard®) 0.1 mg/kg (maximum first dose: 6 mg), <u>rapid</u> IV push (over 1–3 seconds), followed by a rapid flush with 2–3 mL of NORMAL SALINE or LACTATED RINGER'S solution.</p> <p>7.2.2.1 If 0.1 mg/kg dose does not convert rhythm within 1–2 minutes, administer ADENOSINE 0.2 mg/kg (maximum dose: 12 mg), <u>rapid</u> IV push (over 1–3 seconds), followed by a rapid flush with 2–3 mL of NORMAL SALINE or LACTATED RINGER'S solution. If this dose does not convert rhythm, repeat once in 1–2 minutes.</p>	(Adenosine)
	<p>7.3 With authorization from Medical Control, attempt to cardiovert the patient, as indicated below:</p> <p>7.3.1 Medical Control may authorize administration of a sedative and/or analgesic, following the <i>Pain Management and Sedation</i> protocol.</p> <p>7.3.2 Record initial ECG rhythm and attempted cardioversions; attach copies of the rhythm strips to the hospital copy of the <i>RI EMS Ambulance Run Report</i> as part of required documentation.</p> <p>7.3.3 Attempt synchronized cardioversion, as indicated below:</p> <p>7.3.3.1 Adult patients: cardiovert at 50 joules. If unsuccessful, may repeat at increasing energy levels: 100 joules; 200 joules; 300 joules; 360 joules (or maximum energy).</p>	(Cardiovert)
	<p>7.3.3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): attempt synchronized cardioversion at 0.5 joule/kg (0.25 joule/lb). If unsuccessful, may repeat at increasing energy levels: 1.0 joule/kg (0.5 joule/lb); 2 joules/kg (1.0 joule/lb); 4 joules/kg (2 joules/lb).</p>	<p>Pedi: 0.5-1-2-4 Joules/kg</p>
	<p>8. If VT is converted to another dysrhythmia, follow all appropriate protocols.</p> <p>9. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u>.</p> <p>10. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i>.</p>	<p>Transport Document</p>

Effective: 1 July 1995
Revised: 1 August 1995
Revised 1 Oct 99

Ventricular Tachycardia (VT) [ALS]

Flowchart

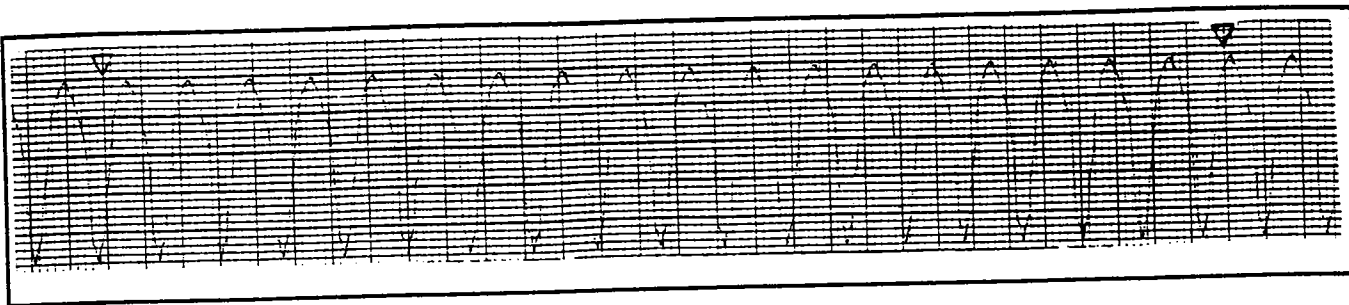
Patient Unconscious, or with Unstable Vital Signs



Effective: 1 July 1995
Revised 1 Oct 99

Ventricular Tachycardia (VT) [ALS]

Patient unconscious with a pulse, or with unstable vital signs



RECOGNITION

Wide-complex tachycardia (ventricular rate usually >150 per minute) on ECG of patient who is unconscious, or who has any of the following signs and symptoms: chest pain; dyspnea; decreased level of consciousness; hypotension; shock; or CHF.

TREATMENT

1. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
2. Loosen tight clothing and allow the patient to sit in a comfortable position unless hypotensive.
3. Administer **OXYGEN** with the highest-concentration device tolerated.
4. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
5. Start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution:
 - 5.1 Adult patients: start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (20–30 mL/hour).

Quick Reference

Physical Exam & Vital Signs

Patient comfort

High conc O₂

Monitor ECG

IV: NS or LR



- 5.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): start at least one IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (10–20 mL/hour).

- 5.3 If unable to establish an IV in ≤2 attempts (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.


6. Attempt to cardiovert the patient, as indicated below:

- 6.1 For conscious patients, consider contacting Medical Control for authorization to administer sedative and/or analgesic, following the *Pain Management and Sedation* protocol.

- 6.2 Record initial ECG rhythm and attempted cardioversions; attach copies of the rhythm strips to the hospital copy of the *RI EMS Ambulance Run Report*, as part of required documentation.

*Cardiovert
(Sedation)*

Record ECG

<p>6.3 Attempt synchronized cardioversion, as indicated below:</p> <p>6.3.1 Adult patients: cardiovert at 50 joules. If unsuccessful, may repeat at increasing energy levels: 100 joules; 200 joules; 300 joules; 360 joules (or maximum energy).</p>	<p><i>Cardiovert</i></p> <p><i>Adult:</i> 50-100-200-300-360 J</p>
 <p>6.3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): attempt synchronized cardioversion at 0.5 joule/kg (0.25 joule/lb). If unsuccessful, may repeat at increasing energy levels: 1.0 joule/kg (0.5 joule/lb); 2 joules/kg (1 joule/lb); 4 joules/kg (2 joules/lb).</p>	<p><i>Pedi:</i> 0.5-1-2-4 Joules/kg</p>
<p>7. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u>.</p>	<p><i>Transport</i></p>
<p>8. Whether or not cardioversion is successful, administer LIDOCAINE HCl as indicated below:</p>	<p><i>Lidocaine</i></p>
<p>8.1 Administer LIDOCAINE HCl 1.0–1.5 mg/kg IV push.</p>	<p><i>Loading dose</i></p>
<p>8.2 Repeat LIDOCAINE HCl, at 0.5–0.75 mg/kg IV push, at 5–10 minute intervals x2.</p>	<p><i>Repeat dose</i></p>
<p>8.3 For patients >70 years, or those with liver failure, use one-half dose.</p>	<p><i>(Reduced dose)</i></p>
<p>9. EMT-Ps only: may perform any or all of the following:</p>	
<p>9.1 If a loading dose has been given, administer LIDOCAINE HCl infusion at 30–50 mcg/kg/minute (2–4 mg/minute), as an alternative or addition to repeat doses.</p>	<p><i>Lidocaine drip</i></p>
<p>9.2 Administer BRETYLIUM TOSYLATE, if available, 5 mg/kg IV push.</p>	<p><i>Bretylium</i></p>
<p>9.3. In 5 minutes, if VF/VT persists, administer BRETYLIUM TOSYLATE, if available, 10 mg/kg IV push.</p>	
<p>9.4 Administer BRETYLIUM TOSYLATE, if available, by IV infusion as indicated below:</p>	<p><i>Bretylium drip</i></p>
<p>9.4.1 Adult patients: infuse BRETYLIUM TOSYLATE, if available, at 1–2 mg/minute.</p>	
<p>10. <u>Contact Medical Control</u>.</p>	<p><i>Med Control</i></p>
<p>10.1 With authorization from Medical Control, EMT-Cs may perform any or all of the following:</p>	
<p>10.1.1 If a loading dose has been given, administer LIDOCAINE HCl infusion at 30–50 mcg/kg/minute (2–4 mg/minute), as an alternative or addition to repeat doses.</p>	<p><i>Lidocaine drip</i></p>
<p>10.1.2 Administer BRETYLIUM TOSYLATE, if available, 5 mg/kg IV push.</p>	<p><i>Bretylium</i></p>
<p>10.1.3 In 5 minutes, if VF/VT persists, administer BRETYLIUM TOSYLATE, if available, 10 mg/kg IV push.</p>	
<p>10.1.4 Administer BRETYLIUM TOSYLATE, if available, by IV infusion as indicated below:</p> <p>10.1.4.1 Adult patients: infuse BRETYLIUM TOSYLATE, if available, at 1–2 mg/minute.</p>	<p><i>Bretylium drip</i></p>

Effective: 1 July 1995
Revised 1 Oct 99

10.2 With authorization from Medical Control, administer **ADENOSINE** (Adenocard®) as indicated below:

(Adenosine)

10.2.1 Adult patients: administer **ADENOSINE** 6 mg, rapid IV push (over 1–3 seconds), followed by rapid flush with 20 mL **NORMAL SALINE** or **LACTATED RINGER'S** solution.

10.2.1.1 If 6 mg dose does not convert rhythm within 1–2 minutes, administer **ADENOSINE** 12 mg, rapid IV push (over 1–3 seconds), followed by rapid flush with 20 mL **NORMAL SALINE** or **LACTATED RINGER'S** solution. If 12 mg dose does not convert rhythm, repeat once in 1–2 minutes.



10.2.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **ADENOSINE** (Adenocard®) 0.1 mg/kg (maximum first dose: 6 mg), rapid IV push (over 1–3 seconds), followed by a rapid flush with 2–3 mL of **NORMAL SALINE** or **LACTATED RINGER'S** solution.

(Adenosine)

10.2.2.1 If 0.1 mg/kg dose does not convert rhythm within 1–2 minutes, administer **ADENOSINE** 0.2 mg/kg (maximum dose: 12 mg), rapid IV push (over 1–3 seconds), followed by a rapid flush with 2–3 mL of **NORMAL SALINE** or **LACTATED RINGER'S** solution. If this dose does not convert rhythm, repeat once in 1–2 minutes.

10.3 With authorization from Medical Control, attempt to cardiovert with multiple shocks.

(Cardiovert)

11. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Document

Abdominal Pain

TREATMENT

1. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
 - 1.1 Attempt to determine the following:
 - 1.1.1 nature, duration, location and radiation of pain
 - 1.1.2 associated symptoms or complaints
 - 1.1.3 related history (eg: trauma, ingestion, pregnancy, surgery)
 - 1.2 Examine abdomen for tenderness, guarding, masses.
2. If abdominal pain is associated with abdominal trauma, follow the *Trauma* protocol, with specific reference to **Further Care of Abdominal Trauma**.
3. Allow the patient to assume a comfortable position, unless contraindicated. Flexion of the knees and hips may help decrease pain.
4. If there is evidence of shock, follow the *Shock* protocol.
5. Administer **OXYGEN** with the highest-concentration device tolerated.

Quick Reference

*Physical Exam
& Vital Signs*

*Consider:
Pain*

Symptoms

History

Inspect & Palpate

R/O trauma

Patient comfort

Treat shock

High conc O₂

▽ ALS PERSONNEL

6. Consider placing the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
7. Consider starting an IV access device or an IV of **NORMAL SALINE** or **LACTATED RINGER'S** to run at KVO rate.
 - 7.1 Adult patients: If an IV has been started, administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (20–30 mL/hour).

Monitor ECG

*IV Access
or
IV: NS or LR*

*Adult:
20–30 mL/hr*



- 7.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): If an IV has been started, administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (10–20 mL/hour).

*Pedi:
10–20 mL/hr*

- 7.3 If unable to establish IV in ≤2 attempts (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.

▽ ALL EMTs

8. Contact Medical Control.
9. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.
10. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Med Control

Transport

Document

Anaphylaxis and Severe Bee Sting Allergy

RECOGNITION

Exposure to a substance (eg: bee sting, peanuts, penicillin, etc.) to which the patient is profoundly sensitive; signs of shock; wheezing; respiratory distress; hives.

TREATMENT

1. Maintain a patent airway; assist ventilation as necessary.
2. Administer **OXYGEN** with the highest-concentration device tolerated.
3. For Patients with severe respiratory distress, administer **EPINEPHRINE 1:1000 (1 mg/mL)** as indicated below. For patients over 50 years of age, or who have a known cardiac history, contact Medical Control prior to administration of **EPINEPHRINE**.
 - 3.1 Adult patients: administer **EPINEPHRINE 1:1000** 0.3 mg (0.3 mL) SQ by drawing from ampules or vials or with a pre-filled syringe (eg: Ana-Kit®) or an **EpiPen®** autoinjector.

Quick Reference

Manage A-B-C

High conc O₂

Epi 1:1000

Draw Epi; or use pre-filled syringe or autoinjector
Adult 0.3 mg



- 3.2 Pediatric patients: administer **EPINEPHRINE 1:1000** SQ by drawing from ampules or vials or with a pre-filled syringe (eg: Ana-Kit®) or an **EpiPen®** autoinjector, as specified below:
 - 3.2.1 Pediatric patients >20 kg (50 lbs): administer **EPINEPHRINE 1:1000** 0.01mL/kg (0.01 mg/kg) SQ, to a maximum of 0.3 mL (0.3 mg) by drawing from ampules or vials or with a pre-filled syringe (eg: Ana-Kit®) or an **EpiPen®** autoinjector.
 - 3.2.2 Pediatric patients 10–20 kg (25–50 lbs): administer **EPINEPHRINE 1:1000** 0.01 mL/kg (0.01 mg/kg) SQ, to a maximum of 0.2 mL (0.2 mg) by drawing from ampules or vials or with a pre-filled syringe (eg: Ana-Kit®) or by an **EpiPen® Jr.** autoinjector.
 - 3.2.3 Pediatric patients <10 kg (25 lbs): administer **EPINEPHRINE 1:1000** 0.01 mL/kg (0.01 mg/kg) SQ, to a maximum of 0.1 mL (0.1 mg) by drawing from ampules or vials or with a pre-filled syringe (eg: Ana-Kit®).

Epi SQ - Pediatric:

>20 kg:
EpiPen® or
0.01 mL/kg,
max: 0.3 mL SQ


10–20 kg:
EpiPen® Jr. or
0.01 mL/kg,
max: 0.2 mL SQ


<10 kg:
0.01 mL/kg,
max: 0.1 mL SQ

4. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
5. Transport should not be delayed; administration of **EPINEPHRINE** and other intervention can be undertaken en route to a HOSPITAL EMERGENCY FACILITY.






Physical Exam
& Vital Signs

Transport ASAP

▽ ALS PERSONNEL	
6. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the <i>RI EMS Ambulance Run Report</i> .	<i>Monitor ECG</i>
7. Start an IV of NORMAL SALINE or LACTATED RINGER'S solution as indicated below:	<i>IV: NS or LR</i>
7.1 Adult patients: administer NORMAL SALINE or LACTATED RINGER'S solution at KVO rate (20–30 mL/hour). If there is evidence of shock, follow the <i>Shock</i> protocol.	
 7.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer NORMAL SALINE or LACTATED RINGER'S solution at KVO rate (10–20 mL/hour). If there is evidence of shock, follow the <i>Shock</i> protocol.	

▽ ALL EMTs	
8. If respiratory distress or shock do not improve, repeat EPINEPHRINE 1:1000 (1 mg/mL):	<i>Epi 1:1000</i>
8.1 Adult patients: administer EPINEPHRINE 1:1000 , 0.3 mg SQ.	<i>Adult: 0.3 mg</i>
 8.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer EPINEPHRINE 1:1000 , as indicated below:	<i>Pediatric:</i>
8.2.1 Patients >20 kg (50 lbs): administer EPINEPHRINE 1:1000 0.01 mL/kg (0.01 mg/kg) SQ to a maximum of 0.3 mL (0.3 mg).	<i>0.01 mL/kg, max: 0.3 mL</i>
8.2.2 Patients 10–20 kg (25–50 lbs): administer EPINEPHRINE 1:1000 0.01 mL/kg (0.01 mg/kg) SQ to a maximum of 0.2 mL (0.2 mg).	<i>0.01 mL/kg, max: 0.2 mL</i>
8.2.3 Patients <10 kg (25 lbs): administer EPINEPHRINE 1:1000 0.01 mL/kg (0.01 mg/kg) SQ to a maximum of 0.1 mL (0.1 mg).	<i>0.01 mL/kg, max: 0.1 mL</i>

▽ ALS PERSONNEL	
8.3 Alternate doses/routes of administration of EPINEPHRINE for patients with severe respiratory distress or hypotension:	<i>(Alternate Epi)</i>
8.3.1 Adult patients: administer EPINEPHRINE 1:10,000 0.01 mg/kg to a maximum of 0.5 mg IV over 5–10 minutes.	<i>(Epi by IV)</i>
8.3.1.1 If unable to establish an IV, administer EPINEPHRINE 1:1,000 2.0–2.5 mg diluted in 10 mL NORMAL SALINE by endotracheal tube.	<i>(Epi by ETT)</i>

<div>  ALS PERSONNEL </div>	
<div>  <p>8.3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer EPINEPHRINE 1:10,000 0.005–0.020 mg/kg (to a maximum of 0.5 mg) IV over 5–10 minutes.</p> <p>8.3.2.1 If unable to establish an IV, administer EPINEPHRINE 1:1,000 0.1 mg/kg (0.1 mL/kg), diluted to 3–5 mL with NORMAL SALINE by endotracheal tube.</p> </div>	<p>(Epi by IV)</p> <p>(Epi by ETT)</p>
<p>9. Administer DIPHENHYDRAMINE (Benadryl®) as indicated below:</p> <p>9.1 Adult patients: administer DIPHENHYDRAMINE (Benadryl®) 25–50 mg PO, IM or IV.</p>	<p><i>Diphenhydramine</i></p> <p><i>Adult:</i> 25–50 mg PO, IM or IV</p>
<div>  <p>9.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer DIPHENHYDRAMINE (Benadryl®) 1 mg/kg PO, IM or IV.</p> </div>	<p><i>Pedi:</i> 1 mg/kg PO, IM or IV</p>
<p>10. Administer METHYLPREDNISOLONE (Solu-Medrol®), if available, as indicated below:</p> <p>10.1 Adult patients: administer METHYLPREDNISOLONE (Solu-Medrol®), if available, 125 mg IV.</p>	<p><i>Methylprednisolone</i></p> <p><i>Adult:</i> 125 mg IV</p>
<div>  <p>10.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer METHYLPREDNISOLONE (Solu-Medrol®), if available, 1–2 mg/kg IV.</p> </div>	<p><i>Pedi</i> 1–2 mg/kg IV:</p>
<p>11. EMT-Ps only: may perform either or both of the following. EMT-Cs must <u>contact Medical Control</u> for authorization to administer DOPAMINE HCl.</p> <p>11.1 Administer DOPAMINE HCl by IV infusion as indicated below:</p> <p>11.1.1 Adult patients: administer DOPAMINE HCl at 5–20 mcg/kg/min IV (preparation: 400 mg in 250 mL D₅W or NS yields 1600 mcg/mL) and titrate the rate to achieve a systolic blood pressure >90 mm Hg.</p>	<p>(Dopamine)</p>
<div>  <p>11.1.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer DOPAMINE HCl as indicated on Broselow® Tape, at 5–20 mcg/kg/min IV, and titrate the rate to achieve a systolic blood pressure above the appropriate age-related value (refer to the following table).</p> </div>	<p>(Dopamine per Broselow® Tape)</p>

Age		Systolic BP	NOTE: absent radial pulse indicates hypotension
Newborn	(birth–1 month)	>40	
Infant	(1 month–1 year)	>60	
Pre-School	(1–6 years)	>75	
School Age	(6–12 years)	>85	
Adolescent	(12–16 years)	>90	

11.2 EMT-Ps only. With authorization from Medical Control, may administer EPINEPHRINE by IV infusion as indicated below:	(Epi drip)
11.2.1 Infuse EPINEPHRINE 0.05–0.20 mcg/kg/min	

▽ ALL EMTs

12. Contact Medical Control.
13. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.
14. If further respiratory or ventilatory problems arise, follow the *Airway Management and Respiratory Support* protocol.
15. If signs of shock are present, follow the *Shock* protocol.
16. Document all incident information by completing the *RI EMS Ambulance Run Report.*

Med Control
Transport

Document

Asthma (COPD)

RECOGNITION

Shortness of breath; difficulty breathing manifested by use of ancillary muscles of respiration; flaring nostrils, inter-costal, supra-clavicular, or sternal retractions (child); musical wheezes; respiratory rate >30 (adult); prolonged expiratory phase of respiration; previous history of asthma or COPD (Chronic Obstructive Pulmonary Disease).

TREATMENT

1. Maintain a patent airway; assist ventilation if needed.
2. Administer **OXYGEN** with the highest-concentration device tolerated.
3. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
4. For Patients with severe respiratory distress, administer **EPINEPHRINE 1:1000 (1 mg/mL)** as indicated below. For patients over 50 years of age, or who have a known cardiac history, contact Medical Control prior to administration of **EPINEPHRINE**.
 - 4.1 Adult patients: administer **EPINEPHRINE 1:1000** 0.3 mg (0.3 mL) SQ by drawing from ampules or vials or with a pre-filled syringe (eg: Ana-Kit®) or an **EpiPen®** autoinjector.

Quick Reference

Manage A-B-C

High conc O₂

*Physical Exam &
Vital Signs*

Epi 1:1000 SQ

*Draw Epi; or use
pre-filled syringe
or autoinjector
Adult 0.3 mg*



- 4.2 Pediatric patients: administer **EPINEPHRINE 1:1000** SQ by drawing from ampules or vials or with a pre-filled syringe (eg: Ana-Kit®) or an **EpiPen®** autoinjector, as specified below:
 - 4.2.1 Pediatric patients >20 kg (50 lbs): administer **EPINEPHRINE 1:1000** 0.01mL/kg (0.01 mg/kg) SQ, to a maximum of 0.3 mL (0.3 mg) by drawing from ampules or vials or with a pre-filled syringe (eg: Ana-Kit®) or an **EpiPen®** autoinjector.
 - 4.2.2 Pediatric patients 10–20 kg (25–50 lbs): administer **EPINEPHRINE 1:1000** 0.01 mL/kg (0.01 mg/kg) SQ, to a maximum of 0.2 mL (0.2 mg) by drawing from ampules or vials or with a pre-filled syringe (eg: Ana-Kit®) or by an **EpiPen® Jr.** autoinjector.
 - 4.2.3 Pediatric patients <10 kg (25 lbs): administer **EPINEPHRINE 1:1000** 0.01 mL/kg (0.01 mg/kg) SQ, to a maximum of 0.1 mL (0.1 mg) by drawing from ampules or vials or with a pre-filled syringe (eg: Ana-Kit®).

*Epi SQ -
Pediatric:*

*>20 kg:
EpiPen® or
0.01 mL/kg,
max: 0.3 mL SQ*

*10–20 kg:
EpiPen® Jr. or
0.01 mL/kg,
max: 0.2 mL SQ*

*<10 kg:
0.01 mL/kg,
max: 0.1 mL SQ*

5. If further respiratory or ventilatory problems arise, follow the *Airway Management and Respiratory Support* protocol.
6. Contact Medical Control, for authorization to administer bronchodilator therapy as indicated below:
 - 6.1 All patients ≥ 6 months of age: administer 2.5 mg of **ALBUTEROL** (Proventil®, Ventolin®) 0.083% solution (or 0.5 mL of 0.5% solution mixed with 2.5 mL **NORMAL SALINE**) by nebulizer over 5–15 minutes. May repeat x 2 en route.

Med Control

*(Albuterol)
by nebulizer*



6.2 For pediatric patients <6 months: administer 1.25 mg of **ALBUTEROL** 0.083% solution (or 0.25 mL of 0.5% solution mixed with 2.5 mL **NORMAL SALINE**) by nebulizer over 5 to 15 minutes. May repeat x 2 en route.

*Pedi <6 months
Albuterol by
nebulizer*

▽ **ALS PERSONNEL**

7. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.

ALS
Monitor ECG

8. Start an IV access device or an IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution as indicated below:

*IV Access
or
IV: NS or LR*

8.1 Adult patients: If an IV has been started, administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO rate (20-30 mL/hour). If there is evidence of shock, follow the *Shock* protocol.



8.2 Pediatric Patients < 5 feet tall (<35 kg/75 lbs): If an IV has been started, administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO rate 10-20 mL/hour). If there is evidence of shock, follow *Shock* protocol.

▽ **ALL EMTS**

9. If respiratory distress or shock do not improve, repeat **EPINEPHRINE 1:1000** (1 mg/mL):

Epi: 1:1000

9.1 Adult patients: administer **EPINEPHRINE 1:1000**, 0.3 mg SQ.

Adult: 0.3 mg



9.2 Pediatric patients < 5 feet tall (<35kg/75lbs): administer **EPINEPHRINE 1:1000**, as indicated below:

Pediatric:

9.2.1 Patients > 20 kg (50 lbs): administer **EPINEPHRINE 1:1000** 0.01 mL/kg (0.01 mg/kg) SQ to a maximum of 0.3 mL (0.3 mg)





*0.01 mL/kg,
max: 0.3 mL*

9.2.2 Patients 10-20 kg (25-50 lbs): administer **EPINEPHRINE 1:1000** 0.01 mL/kg (0.01 mg/kg) SQ to a maximum of 0.2 mL (0.2 mg).

*0.01 mL/kg
max: 0.2 mL*

9.2.3 Patients < 10 kg (25 lbs): administer **EPINEPHRINE 1:1000**, 0.01 mL/kg (0.01 mg/kg) SQ to a maximum of 0.1 mL (0.1 mg).

*0.01 mL/kg
max: 0.1 mL*


V ALS PERSONNEL	
<p>10. Alternate doses/routes of administration of EPINEPHRINE for patients with severe respiratory distress or hypotension:</p> <p>10.1 Adult patients: administer EPINEPHRINE 1:10,000 0.01 mg/kg to a maximum of 0.5 mg IV over 5–10 minutes.</p> <p>10.1.1 If unable to establish an IV, administer EPINEPHRINE 1:1,000 2.0–2.5 mg diluted in 10 mL NORMAL SALINE by endotracheal tube.</p>	<p><i>(Alternate Epi)</i></p> <p><i>(Epi by IV)</i></p> <p><i>(Epi by ETT)</i></p>
 <p>10.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer EPINEPHRINE 1:10,000 0.005–0.020 mg/kg (to a maximum of 0.5 mg) IV over 5–10 minutes.</p> <p>10.2.1 If unable to establish an IV, administer EPINEPHRINE 1:1,000 0.1 mg/kg (0.1 mL/kg), diluted to 3–5 mL with NORMAL SALINE by endotracheal tube.</p>	<p><i>(Epi by IV)</i></p> <p><i>(Epi by ETT)</i></p>
<p>11. As an alternative to EPINEPHRINE, administer TERBUTALINE (Brethine®, Bricanyl®) as indicated below:</p> <p>11.1 Adult patients: administer TERBUTALINE (Brethine®, Bricanyl®) 0.25 mg SQ.</p>	<p><i>(Terbutaline)</i></p>
 <p>11.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer TERBUTALINE (Brethine®, Bricanyl®) 0.01 mg/kg SQ, to a maximum of 0.25 mg/dose.</p>	
<p>12 Administer ALBUTEROL (Proventil®, Ventolin®) as indicated below:</p> <p>12.1 All patients ≥ 6 months of age: administer 2.5 mg of ALBUTEROL 0.083% solution (or 0.5 mL of 0.5% solution mixed with 2.5 mL NORMAL SALINE) by nebulizer over 5–15 minutes. May repeat x 2 en route.</p>	<p><i>(Albuterol)</i> <i>by nebulizer</i></p>
 <p>12.2 For pediatric patients <6 months: administer 1.25 mg of ALBUTEROL 0.083% solution (or 0.25 mL of 0.5% solution mixed with 2.5 mL NORMAL SALINE) by nebulizer over 5 to 15 minutes. May repeat x 2 en route.</p>	<p><i>Pedi <6 months</i> <i>Albuterol by</i> <i>nebulizer</i></p>
<p>13. Administer METHYLPREDNISOLONE (Solu-Medrol®), if available, as indicated below:</p> <p>13.1 Adult patients: administer METHYLPREDNISOLONE (Solu-Medrol®), if available, 125 mg IV.</p>	<p><i>Methylprednisolone</i></p> <p><i>Adult:</i> <i>125 mg IV</i></p>
 <p>13.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer METHYLPREDNISOLONE (Solu-Medrol®), if available, 1–2 mg/kg IV.</p>	<p><i>Pedi:</i> <i>1–2 mg/kg IV</i></p>


∇ ALS PERSONNEL	
14. <u>Contact Medical Control.</u>	<i>Med Control</i>
14.1 <i>EMT-Ps only:</i> With authorization from Medical Control, may administer EPINEPHRINE by IV infusion as indicated below:	<i>(Epi drip)</i>
14.1.1 Infuse EPINEPHRINE 0.05–0.20 mcg/kg/min	
∇ ALL EMTS	
15. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u> .	<i>Transport</i>
16. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> .	<i>Document</i>

Burns

TREATMENT

Quick Reference

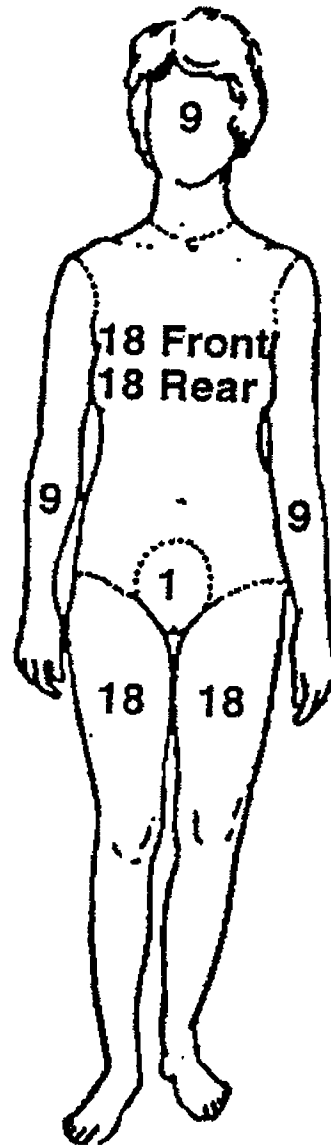
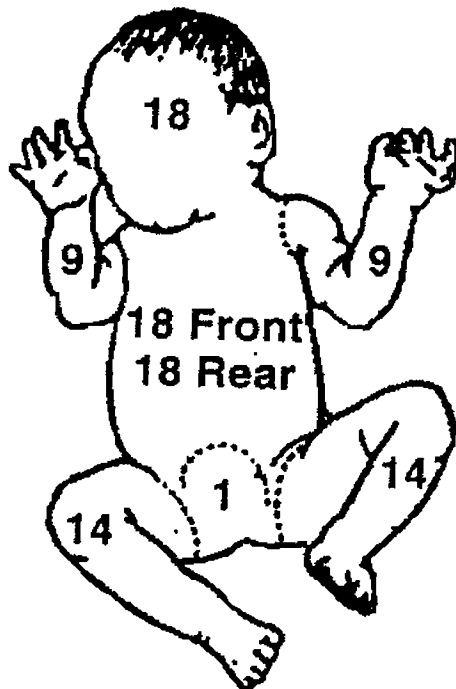
1. Stop the burning process. Remove smoldering, non-adherent clothing.	<i>Limit burns</i>
2. Assess the airway and follow the <i>Airway Management and Respiratory Support</i> protocol, if necessary. Check for breathing and pulse. If not present, start CPR.	<i>Manage A-B-C</i>
3. Remove the patient's clothing and rings (but do not pull off skin or tissue).	<i>Remove burned clothing</i>
4. Suspect an inhalation injury if any of the following is present on secondary assessment: (a) closed space burn (facial burn; singed nasal hairs, beard or mustache) (b) sooty or bloody sputum (c) difficulty breathing or brassy cough	<i>? Inhalation injury</i>
5. Assist ventilation with a bag-mask and high-flow OXYGEN , if necessary; or administer OXYGEN by highest-concentration device tolerated if respirations are normal.	<i>High conc O₂</i> <i>Assist ventilation</i>
5.1 Do not use an esophageal obturator airway.	<i>No EOA</i>
5.2 EMT-Ps only: consider early intubation for patients with signs of inhalation injury or respiratory distress, due to increased incidence of obstruction from airway edema.	<i>(ET Intubation)</i>
 <p>5.3 For pediatric patients <5 feet tall (<35 kg/75 lbs) who demonstrate respiratory distress from suspected upper airway swelling, administer EPINEPHRINE 1:1000 as indicated below. BLS personnel must <u>contact Medical Control</u> for authorization.</p> <p>5.3.1 Administer EPINEPHRINE 5 mL of 1:1000 solution by nebulizer over 5–15 minutes. May repeat once if necessary.</p>	<i>(Pediatric upper airway swelling: Epi)</i>
6. Assess for any trauma that may not have been suspected initially.	<i>Evaluate for other injuries</i>
7. Wash chemical burns with copious amounts of clean water, NORMAL SALINE or other appropriate solutions/decontaminants.	<i>Flush</i>
8. In burns of <10% of body surface area, apply moist saline dressings to comfort the patient. (Third degree burns are not usually painful.)	<i>Moist dressings</i>
8.1 Use aseptic technique as much as possible.	<i>Aseptic tech.</i>
8.2 Cover burned areas >10% of body surface area with sterile dressings or sheets.	
9. Do not allow the patient to consume any food or liquids.	<i>NPO</i>

▽ ALS PERSONNEL	
10. For any patient with a serious burn (2nd and/or 3rd degree >20% of the body surface area), start a large bore IV of NORMAL SALINE or LACTATED RINGER'S solution, as indicated below.	IV: NS or LR
10.1 Adult patients: administer NORMAL SALINE or LACTATED RINGER'S solution at 300 mL/hour; or "wide open" if there is evidence of shock.	
 10.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): Administer NORMAL SALINE or LACTATED RINGER'S solution, 20 mL/kg/hr; or as 20 mL/kg boluses by rapid IV push if there is evidence of shock.	
10.3 If unable to establish an IV in ≤ 2 attempts (5 minutes), transport the patient to a <u>HOSPITAL EMERGENCY FACILITY</u> . Any further attempt at IV placement must occur en route.	
11. <u>Contact Medical Control</u> . For patients exhibiting moderate to severe pain, Medical Control may authorize ALS personnel to administer MORPHINE SULFATE , following the <i>Pain Management and Sedation</i> protocol.	Med Control (Pain relief)
▽ ALL EMTS	
12. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u> . Under certain circumstances transport by air ambulance may be indicated. Refer to <i>Air Ambulance</i> protocol.	Transport
13. For any serious burn of the body and for all inhalation injuries, <u>contact Medical Control</u> en route. Refer to <i>Burn Injury Chart</i> .	Med Control
14. Re-evaluate and monitor for airway distress.	Re-eval airway
15. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> .	Document

Burn Injury Chart

Infants & Children <8 Years

Children \geq 8 Years & Adults



Numbers represent percentage of body surface area (BSA).

The area of the patient's palm (hand without fingers) 1% of the body surface area.

Cold Exposure - Frostbite

TREATMENT

1. Assess patient; obtain initial vital signs; determine mental status; frequently reassess patient's condition. If patient may be hypothermic, follow the *Cold Exposure-Hypothermia* protocol.
2. Avoid trauma to injured areas (do not rub; do not break blisters).
3. Apply dry sterile dressings as padding over injured areas and splint, avoiding pressure or constriction. Do not allow the patient to use injured parts.
4. Do not apply snow or ice; but do not thaw injured areas if there is a chance that they may refreeze before reaching the hospital.
5. Keep the frozen part away from direct heat, but keep the patient warm.
6. Contact Medical Control.
7. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.
8. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Quick Reference

*Physical Exam
Mental Status, &
Vital Signs*

Move patient

Immobilize injury

*Don't thaw if
refreezing
possible*

Warm patient

Med Control

Transport

Document

Cold Exposure - Hypothermia

TREATMENT

1. Primary Assessment:
 - 1.1 Secure the airway; suction if necessary.
 - 1.2 Administer **OXYGEN** with the highest-concentration device tolerated; assist ventilations as necessary.
 - 1.3 If patient develops respiratory distress, follow the *Airway Management and Respiratory Support* protocol.
 - 1.4 If patient is unconscious, not breathing, and pulseless, follow the *Cardiac Arrest* protocol.
2. Assess the patient, obtain initial vital signs, and frequently reassess the patient's condition.
3. Handle patient gently: jarring movements can cause cardiac arrest!
4. Remove patient's wet clothing (by cutting, to limit movement).
5. Prevent heat loss by using blankets (or sleeping bag, etc.).
 - 5.1 Whenever possible, use warmed (40–42° C, 104–107° F) humidified **OXYGEN**. If available, place heat sources at patient's neck, armpits, flanks, and groin.

**Quick
Reference**
Manage A-B-C

Airway

High conc O₂

*Physical Exam
& Vital Signs*

Handle gently

Cut clothes

Keep warm

▼ ALS PERSONNEL

6. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
7. Start an IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution, to run at a keep open rate. Use warmed IV fluids (40–42° C, 104–107° F) whenever possible.
 - 7.1 Adult patients: start an IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (20–30 mL/hour).

Monitor ECG

IV: Warm NS or LR



- 7.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): start an IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO (10–20 mL/hour).

- 7.3 If unable to establish an IV within two tries (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.

8. Contact Medical Control prior to any drug administration in cases of severe hypothermia (core temperature <29.4° C [85° F]).

*Med Control
prior to meds*

▼ ALL EMTs

9. Contact Medical Control.

Med Control



10. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.

Transport

11. Document all incident information by completing the *RI EMS Ambulance Run Report.*

Document

Dyspnea (Shortness of Breath) Without Airway Obstruction

TREATMENT	Quick Reference
<ol style="list-style-type: none"> 1. Place patient in the position in which dyspnea is less pronounced, usually sitting upright. Take appropriate steps to maintain an adequate airway. Assist ventilation, as necessary. 2. Administer OXYGEN with the highest-concentration device tolerated. 3. Assess patient; obtain initial vital signs; frequently reassess patient's condition. <ol style="list-style-type: none"> 3.1 If dyspnea is secondary to asthma or COPD, follow the <i>Asthma (COPD)</i> protocol. 3.2 If dyspnea is secondary to CHF, follow the <i>CHF</i> protocol. 3.3 If dyspnea is secondary to chest trauma, follow the <i>Chest Trauma</i> protocol. 3.4 If dyspnea accompanies cardiac chest pain, follow the protocol for <i>Chest Pain in a Suspected Cardiac Patient</i>. 	<p>Manage A-B-C</p> <p>High conc O₂</p> <p>Physical Exam & Vital Signs Asthma (COPD)</p> <p>CHF</p> <p>Chest Trauma</p> <p>Chest Pain</p>
 <ol style="list-style-type: none"> 3.5 For pediatric patients <5 feet tall (<35 kg/75 lbs) who demonstrate respiratory distress from suspected upper airway swelling, administer EPINEPHRINE 1:1000 as indicated below. BLS personnel must <u>contact Medical Control</u> for authorization. <ol style="list-style-type: none"> 3.5.1 Administer EPINEPHRINE 5 mL of 1:1000 solution by nebulizer over 5–15 minutes. May repeat once if necessary. 	<p>(Pediatric upper airway swelling: Epi)</p>
<p>VALS PERSONNEL</p> <ol style="list-style-type: none"> 4. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the <i>RI EMS Ambulance Run Report</i>. 5. Start an IV access device or at least one IV of NORMAL SALINE or LACTATED RINGER'S to run at KVO rate. <ol style="list-style-type: none"> 5.1 Adult patients: If an IV has been started, administer NORMAL SALINE or LACTATED RINGER'S solution at KVO (20–30 mL/hour).  <ol style="list-style-type: none"> 5.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): If an IV has been started, administer NORMAL SALINE or LACTATED RINGER'S solution at KVO (10–20 mL/hour). 5.3 If unable to establish IV in ≤ 2 attempts (<5 minutes) transport the patient to a <u>HOSPITAL EMERGENCY FACILITY</u>. Any further attempt at IV placement must occur en route. 	<p>Monitor ECG</p> <p>IV Access or IV: NS or LR</p>

▽ ALL EMTs

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 6. If there is evidence of respiratory failure (adult respiratory rate <10 or >30; marked effort to breathe; cyanosis; change in mental status; lethargy), follow the <i>Airway Management and Respiratory Support</i> protocol: | ? Respiratory failure |
| 6.1 Assist ventilations. | Assist ventil. |
| 6.2 Consider endotracheal intubation. | (ET Intubation) |
| 7. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u> . | Transport |
| 8. <u>Contact Medical Control</u> . | Med Control |
| 9. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> . | Document |
-

Heat Cramps and Heat Exhaustion

RECOGNITION

1. Profuse sweating with or without adequate replacement of water but with inadequate replacement of salt.
2. Severe painful muscular cramping of leg and abdominal muscles.
3. The mental state is clear in heat cramps; mental status may be agitated (but not confused) in heat exhaustion.
4. Skin wet and warm with normal color, progressing to moist, cool and pale in heat exhaustion.
5. Core temperature normal or slightly elevated.
6. Generalized weakness, headache, and nausea/vomiting may be present with heat exhaustion.

TREATMENT

1. Assess patient; obtain initial vital signs; determine mental status; frequently reassess patient's condition.
2. Move patient to a cooler area.
3. Loosen or remove non-essential clothing.
4. If there is evidence of shock, elevate the patient's legs and follow the *Shock* protocol.
5. Give water or oral rehydration/electrolyte solution (eg: Gatorade®) PO, if patient is alert and swallows easily.
6. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.
7. Contact Medical Control.
8. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Quick Reference

*Physical Exam
Mental Status &
Vital Signs*

Move patient

Aid heat loss

Treat shock

PO fluids

Transport

Med Control

Document

Heat Stroke

RECOGNITION

1. Air temperature usually 90° F (32.2° C) or above, with high humidity.
2. Usually affects elderly people or those with medical problems.
3. Core temperature 103° F (39.4° C) to 106° F (41.1° C).
4. Absence of sweating (but patients with exertional heat stroke may still be sweating).
5. Skin warm, red and dry (except in exertional heat stroke).
6. Blood pressure is low in 50% of patients.
7. Patients demonstrate confusion or impaired consciousness, or become comatose.
8. Rapid breathing.

TREATMENT

1. Assess patient; obtain initial vital signs; determine mental status; frequently reassess patient's condition.
2. Provide rapid cooling as soon as possible.
 - 2.1 Remove to cool place; open windows; use fans if available.
 - 2.2 Keep patient wet with cool water.
3. Administer **OXYGEN** with the highest-concentration device tolerated.

Quick Reference

*Physical Exam,
VS & Mental
Status*

Rapid cooling

Convection

Evaporation

High conc O₂

▼ ALS PERSONNEL

4. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
5. Start an IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution:
 - 5.1 Adult patients: administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at 200 mL/hour, or "wide open" if there is evidence of shock.

Monitor ECG

IV: NS or LR



- 5.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at 20 mL/kg/hour; or as 20 mL/kg boluses by rapid IV push if there is evidence of shock.

- 5.3 If unable to establish IV in ≤2 attempts, (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.

▼ ALL EMTs

6. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.
7. Contact Medical Control.
8. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Transport

Med Control

Document

Impaired Consciousness

TREATMENT

1. Unless able to rule out trauma, stabilize neck and spine with cervical collar and spineboard as soon as possible.
2. Perform initial assessment while protecting the airway with appropriate maneuver.
3. Position on left side (unless contraindicated), and remove secretions if needed.
4. Administer **OXYGEN** with the highest-concentration device tolerated; assist ventilations as necessary.
5. If further respiratory or ventilatory problems arise, follow the *Airway Management and Respiratory Support* protocol.
6. Obtain history from family and/or bystanders including medications.
7. Assess the patient; determine level of consciousness with the **AVPU** method or **Glasgow Coma Scale**.
 - 7.1 Obtain initial vital signs; frequently reassess patient's condition.
 - 7.1.1 Evaluate pupillary response and size.
 - 7.1.2 Check for breath odors (alcohol or acetone).
 - 7.1.3 Examine for needle tracks.
 - 7.1.4 Examine for medic-alert tags.
8. If signs of shock are present, follow the *Shock* protocol.

Quick Reference

? Trauma:
Immobilize

Initial Survey

*Left lateral
Position.*

High conc O₂

Obtain history

*Physical Exam
LOC*

Vital Signs

Pupils

Breath odors

Needle tracks

Medic-alert

Treat Shock

▽ BLS PERSONNEL

9. If electronic glucose meter is available, determine blood glucose (bG) concentration. Contact Medical Control and report bG level. If bG is <60 mg/dl or unknown, with authorization from Medical Control, EMTs may administer **GLUCAGON**, as indicated below:
 - 9.1 Adult patients administer **GLUCAGON**, if available, 1 mg (1 unit) IM or SQ.


*Med Control
(Glucagon)*


Adult: 1 mg



- 9.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer **GLUCAGON**, if available, 0.1 mg/kg, to a maximum of 1 mg (1 unit), IM or SQ.

Pedi: 0.1 mg/kg

<p>▽ ALS PERSONNEL</p> <p>10. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the <i>RI EMS Ambulance Run Report</i>.</p> <p>11. Start an IV of NORMAL SALINE or LACTATED RINGER'S solution:</p> <p>11.1 Adult patients: administer NORMAL SALINE or LACTATED RINGER'S solution at KVO (20–30 mL/hour).</p>	<p>Monitor ECG</p> <p>IV: NS or LR</p>
 <p>11.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer NORMAL SALINE or LACTATED RINGER'S solution at KVO (10–20 mL/hour); or administer boluses of 20 mL/kg over 5–10 minutes for patients in shock.</p>	
<p>11.3 If unable to establish IV in ≤ 2 attempts, (<5 minutes) transport the patient to a <u>HOSPITAL EMERGENCY FACILITY</u>. Any further attempt at IV placement must occur en route.</p> <p>12. Draw a sample of the patient's blood for blood glucose (bG) analysis. This may be done while starting the IV.</p> <p>13. If electronic glucose meter is available, determine blood glucose (bG) concentration.</p> <p>14. Adult patients with bG <60 mg/dL, as determined by electronic glucose meter, or unknown:</p> <p>14.1 Administer THIAMINE HCl 100 mg IV push or IM.</p> <p>14.2 Administer DEXTROSE (D₅₀W) 25 gm (50 mL) IV over 2 minutes. Repeat once in 5 minutes if there is no improvement in mental status.</p> <p>14.2.1 <u>Do not administer DEXTROSE to a pregnant patient.</u> Administer GLUCAGON 1 mg (1 unit) IM or SQ, in place of DEXTROSE.</p> <p>14.2.2 If unable to establish an IV, administer GLUCAGON 1 mg (1 unit) IM or SQ.</p> <p>15. Adult patients: administer NALOXONE HCl (Narcan®) 2.0 mg IV push (or IM, SQ). Repeat at 3 minute intervals until narcotic overdose is reversed, to a maximum total dose of 10 mg.</p> <p>15.1 Alternative method of administration: administer NALOXONE HCl (Narcan®) 0.4 mg IV push (or IM, SQ). Repeat at 1 minute intervals until narcotic overdose is reversed, to a maximum total dose of 10 mg.</p> <p>15.2 Alternative route of administration, if an endotracheal tube is in place; administer NALOXONE HCl (Narcan®) 2.0 mg diluted in 10 mL NORMAL SALINE, by endotracheal tube.</p>	<p>Draw blood</p> <p>(Check bG)</p> <p>Adult Pt:</p> <p>Thiamine</p> <p>D₅₀W</p> <p>(Pregnant Patient: Glucagon)</p> <p>(Glucagon)</p> <p>Adult Pt: Naloxone</p>

▽ ALS PERSONNEL	
 <p>16. Pediatric patients <5 feet tall (<35 kg/75 lbs) with bG <60 mg/dL or unknown:</p> <p>16.1 Administer DEXTROSE. Use D₂₅W (may be prepared by diluting D₅₀W 1:1 with sterile water or NS) and administer as indicated on Broselow[®] Tape, at 2 mL/kg (0.5 gm/kg) over 5 minutes.</p> <p>16.2 If narcotic overdose is suspected, administer NALOXONE HCl (Narcan[®]) as indicated on Broselow[®] Tape, at 0.1 mg/kg IV push (or IM, SQ, by ETT). Repeat at 3 minute intervals until narcotic overdose is reversed, to a maximum total dose of 10 mg.</p>	<p><i>Pediatric Pt:</i></p> <p><i>D₂₅W per Broselow[®] Tape</i></p> <p><i>(Naloxone per Broselow[®] Tape)</i></p>
▽ ALL EMTS	
<p>17. <u>Contact Medical Control.</u></p> <p>18. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u>, bringing all available medications, vials, and needles.</p> <p>19. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i>.</p>	<p><i>Med Control</i></p> <p><i>Transport</i></p> <p><i>Document</i></p>

Near Drowning

RECOGNITION

Water submersion with an altered mental status and respiratory distress or a cessation of vital functions. **Note: For hypothermic patients, the carotid pulse should be palpated for 30–45 seconds prior to initiation of CPR. If a slow pulse is present, CPR is not necessary.**

TREATMENT

	Quick Reference
1. Coordinate the rescue response to rapidly gain access and remove the victim from the water utilizing sufficient personnel and equipment to ensure safe adherence to protocol.	<i>Safe access</i>
2. If the victim is unresponsive, not breathing, and has no carotid pulse, rapidly remove the victim from the water while controlling the cervical-spine with manual stabilization. Place victim on a long spineboard, clear the airway, begin cardiopulmonary resuscitation, and apply a cervical collar. Follow the <i>Cardiac Arrest</i> protocol.	<i>Remove pt from water on long spineboard</i>
3. <u>Spinal injury should be suspected for an unwitnessed event, an unconscious patient, or if traumatic water entry occurred prior to the event.</u> If there is any question of water entry injury, and adequate resources are available, utilize manual stabilization to immobilize the C-spine while in the water and place victim on a submerged long spineboard. Apply a cervical collar.	<i>Manually stabilize cervical spine in the water.</i>
4. Maintain a patent airway; be prepared for vomiting; suction the patient as required. 4.1 If signs of upper airway obstruction are present, follow the <i>Airway Management and Respiratory Support</i> protocol.	<i>Manage A-B-C</i>
5. Administer OXYGEN with the highest-concentration device tolerated; assist ventilations as necessary.	<i>High conc O₂</i>
6. If the victim was subject to cold water immersion, follow the <i>Cold Exposure-Hypothermia</i> protocol. 6.1 Avoid excessive movement of the victim. 6.2 Remove wet clothing, dry the victim and cover the victim with warm dry material.	<i>? Cold water: Handle gently Dry/warm pt</i>
7. If the victim was involved in underwater diving with diving equipment, <u>contact Medical Control.</u> 7.1 With authorization from Medical Control, contact the National Divers' Alert Network (919 684-8111) for consideration of transport to a <i>HYPERBARIC TREATMENT FACILITY</i> .	<i>? SCUBA: Med Control (D•A•N)</i>
8. <u>Contact Medical Control.</u>	<i>Med Control</i>
9. Transport patient without delay to the appropriate <i>HOSPITAL EMERGENCY FACILITY</i> or <i>HYPERBARIC TREATMENT FACILITY</i> as directed by Medical Control.	<i>Transport</i>
10. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> .	<i>Document</i>



Newborn Resuscitation

TREATMENT

		Quick Reference
1.	Determine if amniotic fluid is meconium-stained (green or brown fluid).	? Meconium
1.1	If meconium is present, thoroughly suction the infant's nose and mouth prior to <u>delivery of the head and shoulders</u> using a flexible suction catheter.	Suction nose and mouth with flexible catheter
1.2	EMT-Ps only: If meconium is thick or particulate, perform endotracheal intubation and tracheal aspiration prior to stimulating the infant.	(ETT suction)
2.	Suction the infant's nose and mouth using a bulb syringe or flexible suction catheter. Suctioning should be limited to less than 5 seconds to avoid hypoxia or bradycardia.	Suction nose and mouth
3.	Minimize heat loss from the infant:	Keep warm:
3.1	Dry the infant thoroughly.	Dry
3.2	Cover the infant's head.	Cover head
3.3	Wrap the infant in plastic wrap and blankets or towels.	Wrap
3.4	Increase the heat in the room (and ambulance) as much as possible.	Increase heat
4.	Position the infant to establish and maintain a patent airway.	Airway
5.	Stimulate the infant's breathing for 5–10 seconds by drying, warming, flicking the soles of the feet, and rubbing the back.	Stimulate
5.1	Evaluate breathing.	Eval. Breathing
5.1.1	If the infant is <u>apneic or has weak or gasping respirations</u> , assist ventilations with BVM and 100% O ₂ at 40–60/minute.	BVM with O ₂ at 40–60/min
5.1.2	If breathing is <u>adequate</u> , evaluate color. If cyanotic or in respiratory distress, administer high-concentration O ₂ by "blow-by" method.	High conc O ₂
6.	Evaluate heart rate (brachial, umbilical, or apical pulse), and <u>monitor continuously</u> to guide resuscitation.	Monitor Heart Rate
6.1	Provide treatment as shown in the following table:	
	<u>Heart rate</u> <u>Treatment</u>	Treatment dependent on spontaneous heart rate
	>100 High-flow O ₂ by "blow-by" method	
	60–100 BVM at 40–60/minute for 15–30 seconds with 100% O ₂	
6.2	Reassess heart rate, and continue treatment as shown in the following table:	Reassess HR
	<u>Heart rate</u> <u>Treatment</u>	
	>100 High-flow O ₂ by "blow-by" method	Treatment dependent on spontaneous heart rate
	>80 and ↑ BVM at 40–60 per minute with 100% O ₂	
	60–80 CPR (3:1) at rate of 120 compressions per minute, until spontaneous heart rate >80	

- 6.3 **EMT-Ps only:** Perform endotracheal intubation if chest compressions or prolonged assisted ventilations are required. Use the following ET tube size guidelines:

ET Intubation

Approximate weight	Gestational age	ETT size
<1500 gm	<30 weeks	2.5 mm
1500–2500 gm	30–36 weeks	3.0 mm
>2500 gm	>36 weeks	3.5 mm

▼ **ALS PERSONNEL**

7. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.

Monitor ECG

- 7.1 If the heart rate remains <80 despite assisted ventilations and chest compressions, administer **EPINEPHRINE 1:10,000** 0.1–0.3 mL/kg (0.01–0.03 mg/kg) by endotracheal tube. May repeat every 3–5 minutes, if bradycardia or asystole persist.

(Epi 1:10,000)

▼ **EMT-PS ONLY**

- 7.2 If the heart rate remains <80, place an umbilical venous catheter and administer **EPINEPHRINE 1:10,000** 0.1–0.3 mL/kg (0.01–0.03 mg/kg) IV. May repeat every 3–5 minutes, if bradycardia or asystole persist.

(UVC;
Epi 1:10,000)

- 7.3 If the infant has signs of shock, place an umbilical venous catheter and administer **NORMAL SALINE** 10 mL/kg IV push. This may be repeated twice if signs of shock persist.

(UVC, Normal
Saline bolus)

- 7.4 If unable to establish umbilical venous access, attempt to establish an Intraosseous infusion, or a peripheral IV. If unable to establish vascular access, continue to administer **EPINEPHRINE 1:10,000** 0.1–0.3 mL/kg (0.01–0.03 mg/kg) by endotracheal tube every 3–5 minutes, as necessary.

(Periph. IV, IO)

▼ **ALL EMTs**

8. Assess patient; obtain initial vital signs; frequently reassess patient's condition en route.

Physical Exam
& Vital Signs

- 8.1 Calculate the APGAR scores at 1 and 5 minutes of life. Determination of the APGAR scores should not delay resuscitation.

APGAR scores

APGAR Scoring System

PHYSICAL SIGN	0 POINTS	1 POINT	2 POINTS
Heart rate	absent	<100	>100
Respiratory effort	absent	slow, irregular (or weak cry)	normal (or strong cry)
Muscle tone	limp	some flexion	active motion
Reflex irritability	no response	grimace; some motion	cough or sneeze; vigorous cry
Color	blue, pale	mucus membranes pink; nail beds blue	mucus membranes and nail beds pink

- | | |
|---------------------------------------------------------------------------------------------|--------------------|
| 9. <u>Contact Medical Control.</u> | <i>Med Control</i> |
| 10. Transport the infant to a <u>HOSPITAL EMERGENCY FACILITY</u> without delay. | <i>Transport</i> |
| 11. Document all incident information by completing the <i>RI EMS Ambulance Run Report.</i> | <i>Document</i> |

Obstetrical Assistance

TREATMENT

Quick Reference

1. Assess patient; obtain initial vital signs; frequently reassess patient's condition.

*Physical Exam
& Vital Signs*

1.1 Evaluate the vital signs, especially blood pressure.

Evaluate VS

1.1.1 If there is evidence of shock, follow the *Shock* protocol.

Treat shock

1.1.2 If swelling and/or high blood pressure are present, be prepared for possible seizure activity (eclampsia).

Possible seizures

1.2 Examine the perineum:

Exam:

1.2.1 Check for vaginal bleeding.

? bleeding

1.2.2 Check for crowning during contraction.

? crowning

1.2.3 Check for abnormal presentation (eg: hand, umbilical cord).

? abnormal presentation

1.3 Attempt to determine the following information about labor:

Labor info

1.3.1 What is the length of time between contractions?

1.3.2 Have the membranes ruptured? When?

1.3.3 Is there any bleeding? How much?

1.3.4 Has the baby's head or any other part appeared?

1.4 Attempt to determine the following information about the pregnancy:

Pregnancy info

1.4.1 Have there been any problems or complications?

1.4.2 Has the mother delivered any other babies?

1.4.3 How close to the due date?

1.4.4 Is there more than one fetus?

1.4.5 Has there been any drug use?

2. Determine whether to assist at scene, or transport.

? Stay or transport

2.1 If patient is not pushing or bleeding, transport without delay in position of comfort to a HOSPITAL EMERGENCY FACILITY.

2.2 If delivery is in progress or imminent, assist at scene unless complications occur.

▽ ALS PERSONNEL

2.3. Consider starting an IV access device or an IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution to run at KVO rate (20–30 mL/hour).

*IV Access
or
IV: NS or LR*

▽ ALL EMTs

3. To assist in a normal delivery, follow the <i>Newborn Resuscitation protocol</i> , and provide the following care:	<i>Follow Newborn Resuscitation</i>
3.1. Administer OXYGEN with the highest-concentration device tolerated.	<i>High conc O₂</i>
3.2 Position mother for delivery	<i>Position</i>
3.3 Whenever possible, use sterile or aseptic technique.	<i>Aseptic tech.</i>
3.4 Apply gentle pressure against the baby's head to guide and control delivery.	<i>Gentle pressure</i>
3.5 Support the head and thorax as they appear.	<i>Support body</i>
3.6 Apply two clamps to cord, approximately 8 inches from baby's abdomen. Cut cord between the clamps.	<i>Clamp and cut umbilical cord</i>
3.7 If no active resuscitation is required:	
3.7.1 Dry the infant, cover its head, and wrap the baby to minimize heat loss.	<i>Dry and warm infant</i>
3.7.2 Encourage the mother to nurse, to assist uterine contractions.	<i>Mother to nurse</i>
4. Transport the mother and the infant(s) without delay to a <u>HOSPITAL EMERGENCY FACILITY</u> .	<i>Transport</i>
4.1 Unless active resuscitation is required, the infant(s) is (are) to be transported in an appropriate child passenger restraint system.	
5. <u>Contact Medical Control</u> .	<i>Med Control</i>
6. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> .	<i>Document</i>

Pain Management and Sedation (Optional) [ALS]

TREATMENT

Quick Reference

1. For patients exhibiting moderate to severe pain or pulmonary congestion, and with authorization from Medical Control, provide treatment as follows:

Med Control

- 1.1 Assess and record the following signs, and reassess frequently:

Monitor:

(a) level of consciousness

LOC

(b) heart rate, respiratory rate, blood pressure

HR, RR, BP

(c) ECG

ECG

(d) oxygen saturation, if pulse oximeter is available

(SpO₂)

- 1.2 Administer **MORPHINE SULFATE** (MSO₄) as indicated below:

Morphine

- 1.2.1 All patients \geq 6 months of age (~7 kg/15 lbs): administer **MORPHINE SULFATE** 0.1 mg/kg IV over 2 minutes, with a maximum initial dose of 6 mg.

IV over 2 min.

- 1.2.1.1 If unable to establish an IV, administer **MORPHINE SULFATE** 0.1 mg/kg SQ or IM, with a maximum initial dose of 6 mg.

SQ or IM

- 1.2.1.2 Administer additional doses of 0.05 mg/kg (adult patients: 1–3 mg) IV over 2 minutes (or SQ, IM) at 5–30 minute intervals, until pain is relieved.

(Repeat doses)



- 1.2.2 Pediatric patients <6 months of age (~7 kg/15 lbs): administer **MORPHINE SULFATE** 0.05 mg/kg IV over 2 minutes.

IV over 2 min

- 1.2.2.1 If unable to establish an IV, administer **MORPHINE SULFATE** 0.05 mg/kg SQ or IM.

SQ or IM

- 1.2.2.2 Administer additional doses of 0.05 mg/kg IV over 2 minutes (or SQ, IM) at 5–30 minute intervals, until pain is relieved.

(Repeat doses)

- 1.3 Medical Control may authorize the administration of subsequent doses at 5 minute intervals, to achieve effect.

(Additional doses)

- 1.4 Standing order if patient develops respiratory depression, hypotension, or depressed consciousness:


Treat respiratory depression, LOC

- 1.4.1 Provide appropriate airway and ventilatory support.

Manage A-B-C

- 1.4.2 Administer **NALOXONE HCl** 0.01 mg/kg IV push (or IM, SQ, or (diluted in **NORMAL SALINE**) by endotracheal tube, PRN). (Note: This dose is appropriate to reduce the side effects induced by therapeutic narcotic use, in contrast to the dose used to reverse narcotic overdose, 0.1 mg/kg.)

*Naloxone:
Low doses to
reduce side
effects*

2. For patients who are to be cardioverted or intubated; or others who would benefit from sedation; and with authorization from Medical Control, provide treatment as follows:	<i>Sedation</i>
2.1 Assess and record the following signs, and reassess frequently:	<i>Monitor:</i>
(a) level of consciousness,	<i>LOC</i>
(b) heart rate, respiratory rate, blood pressure	<i>HR, RR, BP</i>
(c) ECG	<i>ECG</i>
(d) oxygen saturation, if pulse oximeter is available	<i>(SpO₂)</i>
2.2 Administer DIAZEPAM (Valium®) as indicated below:	<i>Diazepam</i>
2.2.1 Adult patients: administer DIAZEPAM 5–15 mg IV, at a rate not to exceed 5 mg per minute.	
 2.2.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer DIAZEPAM as indicated on Broselow® Tape, at 0.05–0.2 mg/kg IV, at a rate not to exceed 5 mg per minute.	<i>Diazepam per Broselow® Tape</i>
2.2.3 Allow 5–10 minutes for effect.	
2.3 As an alternative to DIAZEPAM , administer MIDAZOLAM HCl (Versed®) as indicated below:	
2.3.1 Administer MIDAZOLAM 0.05–0.1 mg/kg IV over 1 minute, or IM. Adult maximum: 5 mg; pediatric maximum: 2.5 mg.	<i>Midazolam</i>
2.3.2 Allow 2 minutes for effect (10 minutes for IM). Medical Control may authorize the administration of subsequent doses. Recommendation: 25% of initial dose, to a maximum total dose of 0.6 mg/kg, to maintain effect.	
2.4 If patient develops respiratory depression or hypotension, provide appropriate airway, respiratory and ventilatory support.	<i>Treat respiratory depression, LOC Manage A-B-C</i>
3. With authorization from Medical Control for certain patients, administer both MORPHINE SULFATE and MIDAZOLAM (which may be combined in the same syringe).	
4. Document procedures to provide pain management and sedation by completing the <i>RI EMS Ambulance Run Report</i> .	<i>Document</i>

Poisoning and Overdose

TREATMENT

Quick Reference

1. If the patient is unconscious or has impaired consciousness, follow the *Impaired Consciousness* protocol.
2. Contact the Regional Center for Poison Control & Prevention (1-800-682-9211), or contact Medical Control. As directed, perform one of the following:
 - 2.1 Administer **ACTIVATED CHARCOAL** 1 gm/kg (0.5 gm/lb) PO, mixed with water or sorbitol.
 - 2.1.1 Administer **ACTIVATED CHARCOAL** only if the patient is fully conscious, or has an endotracheal tube in place.
 - 2.1.2 **EMT-Ps only:** administer **ACTIVATED CHARCOAL** by orogastric or nasogastric tube, if unable to administer PO.
 - 2.1.3 Do not administer **ACTIVATED CHARCOAL** if patient has ingested a hydrocarbon, petroleum distillate, or a caustic substance.
 - 2.2 Administer **SYRUP OF IPECAC** as indicated below:
 - 2.2.1 Patients 8 years of age: administer **SYRUP OF IPECAC** 30 mL (2 tablespoons) PO, followed by at least 8 ounces of water.

? Impaired Consciousness

Poison Control (Med Control)

Activated Charcoal

Ipecac



- 2.2.2 For patients <8 years of age, **SYRUP OF IPECAC** 15 mL (1 tablespoon) PO, followed by at least 4 ounces of water.

- 2.2.3 Do not administer **SYRUP OF IPECAC** if:

- 2.2.3.1 the patient has no gag reflex, or is actively seizing or vomiting.
- 2.2.3.2 the patient has ingested a sharp object; hydrocarbon; petroleum distillate; or a caustic substance (acid or alkali).
- 2.2.3.3 the patient has a bleeding disorder.

- 2.2.4 Prepare for vomiting by having large emesis container and suction equipment ready.


Contraindications

gag reflex, Sz, vomiting

ingestion: sharp object, petroleum distillate, caustic

bleeding disorder

Suction ready

▲ ALS PERSONNEL	
3. Start an IV of NORMAL SALINE or LACTATED RINGER'S solution:	<i>IV: NS or LR</i>
3.1 Adult patients: administer NORMAL SALINE or LACTATED RINGER'S solution at KVO (20–30 mL/hour), or “wide open” if there is evidence of shock.	
 3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer NORMAL SALINE or LACTATED RINGER'S solution at KVO (10–20 mL/hour); or administer boluses of 20 mL/kg boluses by rapid IV push if there is evidence of shock.	
3.3 If unable to establish IV in 2 attempts, (<5 minutes) transport the patient to a <u>HOSPITAL EMERGENCY FACILITY</u>. Any further attempt at IV placement must occur en route.	
4. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the <i>RI EMS Ambulance Run Report</i>..	<i>Monitor ECG</i>
▲ ALL EMTS	
5. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u> bringing all available medications, vials, and needles.	<i>Transport Bring clues</i>
6. <u>Contact Medical Control</u>.	<i>Med Control</i>
7. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i>.	<i>Document</i>

Radiation Exposure

TREATMENT

1. Contact Medical Control by radio or telephone while en route to the scene. Relay the available information and estimated time of arrival of your unit. Further instructions for decontamination of the patient, your vehicle and yourself will be given to you by Medical Control.
2. Use common sense. The time you are exposed and the distance you are away from the source are the exposure factors for contaminants. Once separated from the source, an exposed (not contaminated) person is not a risk to you.
3. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
4. If patient's clothing has not been removed by the initial responders, contact Medical Control for guidance on removal of clothing.
5. Responsibility for patient:
 - 5.1 Give lifesaving emergency assistance, as needed.
 - 5.2 Secure pertinent information from appropriate bystanders.
 - 5.3 If patient has a wound, cover it with clean dressings using gauze or elastic bandage (not adhesive tape).
 - 5.4 Cover stretcher, including pillow, with an open blanket, then wrap the patient in the blanket to limit spread of contamination.
6. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY.
7. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Quick Reference

Contact Medical Control while en route to scene

Common sense: time, distance

Physical Exam & Vital Signs

? Pt's Clothing

Manage A-B-C

Bystander info

Bandage without tape

Contain contamination

Transport

Document

Seizures/Postictal State

For pediatric patients <5 feet tall (<35 kg/75 lbs.), follow **Seizures (Pediatric)** protocol.

RECOGNITION

Seizure: A sudden episode of unresponsiveness, characterized by mild to severe involuntary contractions of skeletal muscles.

Postictal: Third phase of a convulsive seizure. Convulsions stop, and the patient may be drowsy or remain unconscious for hours.

TREATMENT

1. Unless unable to rule out trauma, stabilize neck and spine with cervical collar and spineboard as soon as possible.
2. Perform initial assessment while protecting the airway with an appropriate airway.
3. Protect patient from sustaining any injuries.
4. Position on left side (unless contraindicated), and remove secretions if needed.
5. Administer **OXYGEN** with the highest concentration device tolerated; assist ventilation's as necessary.
6. If signs of ventilatory problems arise, follow the *Airway Management and Respiratory Support protocol*.
7. Obtain history from family and/or bystanders including medications. Determine, if possible, any previous history of seizure activity.
8. Assess the patient; determine the level of consciousness with the **AVPU** method or **Glasgow Coma Scale**.
9. If electronic glucose meter is available, determine blood glucose (bG) concentration
10. If the bG concentration is <60 mg/dl or if the patient has signs and/or symptoms of hypoglycemia regardless of the availability of bG measurement, and the patient's mental status is "alert" **A** or becomes alert to "verbal" **V** stimuli, then administer an **ORAL GLUCOSE** product, if available, as indicated below:
 - 10.1 Administer an **ORAL GLUCOSE** with approximately 15 grams of **GLUCOSE** (e.g. Glucola, Glutose 15™, InstaGlucose).
 - 10.2 **Do not** administer an **ORAL GLUCOSE** product to a patient who is vomiting, nauseated, or not fully awake.
 - 10.3 Repeat administration of **ORAL GLUCOSE** product, approximately 15 grams, if evidence of hypoglycemia persists beyond 15 minutes after the first dose.
 - 10.4 **Contact Medical Control** for authorization to administer **GLUCAGON 1 mg** (1 unit) IM or SQ, if available.

Quick Reference

? Trauma:
-Immobilize

Initial Survey

Protect Patient

Left Lateral Position

High conc O2

Obtain history

Physical Exam, LOC

Glucose Meter

Oral Glucose

*Glucagon Adult
1 mg*

▽ ALS PERSONNEL

11. If seizure activity persists, or if the patient has impaired consciousness:

? Unstable

11.1 Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.

Monitor ECG

11.2 Start an IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO rate (20-30 ml per hour).

IV: NS or LR

11.2.1 If unable to start an IV in ≤ 2 attempts, (< 5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.

11.3 Draw a sample of the patients blood for blood glucose (bG) analysis. This may be done while starting the IV.

Draw blood

11.4 Patients with bG < 60 mg/dL as determined by electronic glucose meter, or unknown:

? Hypoglycemia

11.4.1 Administer **THIAMINE HCl** 100 mg IV push or IM.

Thiamine

11.4.2 Administer **DEXTROSE (D_{50W})** 25 gm (50 mL) IV over 2 minutes. Repeat once in 5 minutes if there is no improvement in mental status.

D_{50W}

11.4.2.1 Do not administer **DEXTROSE** to a pregnant patient. Administer **GLUCAGON** 1 mg (1 unit) IM or SQ, in place of **DEXTROSE**.

(Pregnant Pt: Glucagon)

11.4.2.2 If unable to establish an IV, administer **GLUCAGON** 1 mg (1 unit) IM or SQ.

(Glucagon)

11.5 Administer **NALOXONE HCl** (Narcan®) 2.0 mg IV push (or IM, SQ). Repeat at 3 minute intervals until narcotic overdose is reversed or to a maximum total dose of 10 mg.

Naloxone

11.5.1 Alternative method of administration: administer **NAXOLONE HCl** (Narcan®) 0.4 mg IV push (or IM, SQ). Repeat at 1 minute intervals until narcotic overdose is reversed or to a maximum total dose of 10 mg.

11.5.2 Alternative method of administration: If endotracheal tube is in place, administer **NAXOLONE HCl** (Narcan®) 2.0 mg diluted in 10 ml **NORMAL SALINE**, by endotracheal tube.

11.6 **EMT-P's:** If seizures continue, administer **DIAZEPAM** (Valium®) or **MIDAZOLAM** (Versed®) as indicated below. **EMT-C's** must contact Medical Control for authorization to administer **DIAZEPAM** (Valium®) or **MIDAZOLAM** (Versed®).

? Continued Sz
Diazepam or
Midazolam

11.6.1 Administer **DIAZEPAM** (Valium®), if available, 5-10 mg IV over 1-2 minutes. Repeat at 5-15 minutes X2, as needed or to a maximum total dose of 30 mg, or

(Diazepam)

11.6.2 Administer **MIDAZOLAM** (Versed®), if available, 2.5-5.0 mg IV over 1-2 minutes or IM (or 2.5-5.0 mg by ETT diluted in 10 ml **NORMAL SALINE**). Repeat at 5-15 minutes X2, as needed or to a maximum total dose of 10 mg.

(Midazolam)

▽ **ALL EMT'S**

12. Contact Medical Control

Med Control

13. Transport patient without delay to a Hospital Emergency Facility.

Transport

14. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Document



Seizures (Pediatric)

RECOGNITION

Seizure: A sudden episode of unresponsiveness, characterized by mild to severe involuntary contractions of skeletal muscles.

Postictal: Third phase of a convulsive seizure. Convulsions stop, and the patient may be drowsy or remain unconscious for hours.

TREATMENT

1.	Unless able to rule out trauma, stabilize neck and spine with cervical collar and spineboard as soon as possible.	Quick Reference <i>? Trauma:</i> –Immobilize
2.	Perform initial assessment while protecting the airway with an appropriate maneuver.	<i>Initial Survey</i>
3.	Protect patient from sustaining any injuries.	<i>Protect patient</i>
4.	Position on left side (unless contraindicated), and remove secretions if needed.	<i>Left lateral position.</i>
5.	Administer OXYGEN with the highest-concentration device tolerated; assist ventilations as necessary.	<i>High conc O₂</i>
6.	If signs of ventilatory problems arise, follow the <i>Airway Management and Respiratory Support</i> protocol.	
7.	Obtain history from family and/or bystanders, including medications. Determine, if possible, any previous history of seizure activity.	<i>Obtain history</i>
8.	Assess the patient; determine level of consciousness with the AVPU method or Pediatric Glasgow Coma Scale .	<i>Physical Exam</i> <i>LOC</i>
9.	If rectal temperature exceeds 38.9° C (102° F) rectal or equivalent, administer ACETAMINOPHEN (Tylenol®) suppository per rectum, 15 mg/kg (7 mg/lb).	<i>(Acetaminophen)</i>
10.	If electronic Glucose meter is available, determine blood Glucose (bG) Concentration	<i>Glucose meter</i>
11.	If the bG concentration is <60 mg/dl or if the patient has signs and/or symptoms of hypoglycemia, and the patient's mental status is "alert" A or becomes alert to "verbal" V stimuli, then administer an ORAL GLUCOSE product, if available, as indicated:	<i>Oral glucose</i>
11.1	Administer an ORAL GLUCOSE product with approximately 15 grams of GLUCOSE (e.g. Glucola, Glutose 15™, InstaGlucose)	
11.2	For pediatric patients younger than 1 year of age (<10 kg), Contact Medical Control . With authorization from Medical Control, EMTs may administer an ORAL GLUCOSE product as directed by Medical Control.	<i>Medical Control</i>

- 11.3 **Do not** administer an **ORAL GLUCOSE** product to a patient who is vomiting, nauseated, or not fully awake.
- 11.4 Repeat administration of **ORAL GLUCOSE** product, approximately 15 grams, if evidence of hypoglycemia persists beyond 15 minutes after first dose.
- 11.5 **Contact Medical Control** for authorization to administer **GLUCAGON 1 mg** (1 unit) IM or SQ, if available.
- 11.5.1 Pediatric patients <5 feet tall (<35 kg/75 lbs) administer **GLUCAGON 0.1 mg/kg**, to a maximum of **1 mg** (1 unit), IM or SQ.

Glucagon

Pedi:
Glucagon**▽ ALS PERSONNEL**

12. If seizure activity persists, or if the patient has impaired consciousness:
- 12.1. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the *RI EMS Ambulance Run Report*.
- 12.2. Start an IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution:
- 12.2.1 Administer **NORMAL SALINE** or **LACTATED RINGER'S** solution at KVO rate (10–20 mL/hour); or administer boluses of 20 mL/kg over 5–10 minutes for patients in shock.
- 12.2.2 If unable to establish IV in ≤ 2 attempts, (<5 minutes) transport the patient to a HOSPITAL EMERGENCY FACILITY. Any further attempt at IV placement must occur en route.
- 12.3. Draw a sample of the patient's blood for blood glucose (bG) analysis. This may be done while starting the IV.
13. **EMT-Ps** If patient has demonstrated persistent seizure activity for more than 15 minutes; or has airway compromise with cyanosis or bradycardia, administer **DIAZEPAM** (Valium®) or **MIDAZOLAM** (Versed®) as indicated below. **EMT-Cs** must **contact Medical Control** for authorization to administer **DIAZEPAM** (Valium®) or **MIDAZOLAM** (Versed®).
- 13.1 Administer **DIAZEPAM** (Valium®), if available, as indicated on Broselow® Tape: 0.1–0.3 mg/kg IV over 2 minutes to a maximum of 10 mg, or
- 13.2 Administer **MIDAZOLAM** (Versed®), if available, as indicated on Broselow® Tape: 0.05–0.1 mg/kg IV over 1–2 minutes or IM, (or 0.05–0.1 mg/kg by ETT diluted in 5 ml **NORMAL SALINE**) to a maximum of 2.5 mg, or
- 13.3 Administer **DIAZEPAM SOLUTION** (Valium®) or **GEL** (Diastat), if available, 0.5 mg/kg per rectum to a maximum of 20 mg.
- 13.4 If seizure activity persists, repeat administration of **DIAZEPAM** (Valium®), if available, (IV preferred, rectal, if IV not available) once in 5 minutes to a maximum of 10 mg, or
- 13.5 Repeat administration of **MIDAZOLAM** (Versed®) 0.05–0.1 mg once in 5 minutes to a maximum of 2.5 mg.

? Sz/Imp Cons:

Monitor ECG

IV: NS or LR

Draw blood

Diazepam or
Midazolam per
Broselow® Tape

Diazepam

Midazolam

Diastat

14. If seizure activity persists; or if patient has bG <60 mg/dL or unknown:	Cont Sz or low bG
14.1 Administer DEXTROSE . Use D₂₅W (may be prepared by diluting D₅₀W 1:1 with sterile water or NS), and administer as indicated on Broselow® Tape, at 2 mL/kg (0.5 gm/kg) over 5 minutes.	D ₂₅ W per Broselow® Tape
14.1.1 <u>Do not administer DEXTROSE to a pregnant patient.</u> Administer GLUCAGON 1 mg (1 unit) IM or SQ, in place of DEXTROSE .	(Pregnant Pt: Glucagon)
14.1.2 If unable to establish an IV, administer GLUCAGON 0.1 mg/kg, to a maximum dose of 1 mg (1 unit) IM or SQ.	(Glucagon)

▽ EMT-Ps ONLY:	
15. If seizures continue, <u>contact Medical Control</u> for authorization to administer PHENOBARBITAL , as indicated on Broselow® Tape:	? Continued Sz Med Control
15.1 Administer PHENOBARBITAL 20 mg/kg IV, at a rate <50 mg/min.	(Phenobarb per Broselow® Tape)
15.1.1 May administer additional doses of 5 mg/kg every 20 minutes, as necessary, to control seizure activity.	
15.2 Be prepared to provide appropriate airway management and ventilatory support.	Monitor airway and breathing

▽ ALL EMTs

16. <u>Contact Medical Control.</u>	Med Control
17. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u> .	Transport
18. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> .	Document

Shock

RECOGNITION

Shock is a state of decreased tissue perfusion that can result from a large variety of causes. Consider the diagnosis of shock for any patient with:

1. Altered mental status
2. Impaired consciousness; restlessness; coma
3. Pale, cool, clammy (diaphoretic) skin
4. Abnormal vital signs, as shown in the table below:

Abnormal Vital Signs

Age		Respiratory Rate		Heart Rate		Systolic BP	
		TOO SLOW	TOO FAST	TOO SLOW	TOO FAST	TOO LOW	NOTE:
Newborn	(birth–1 month)	<30	>80	<100	>200	<40	Absent
Infant	(1 month–1 year)	<20	>70	<80	>180	<60	Radial
Pre-School	(1–6 years)	<16	>40	<70	>160	<75	Pulse
School Age	(6–12 years)	<12	>30	<60	>140	<85	Indicates
Adolescent	(12–16 years)	<10	>24	<60	>120	<90	Hypotension
Adult	(≥16 years)	<10	>24	<60	>120	<90	

5. Significant hypotension, as indicated for **adult** patients in the table below:

<i>If unable to palpate pulse at:</i>	<i>Systolic BP is probably:</i>
radial artery	<90 mm Hg
brachial artery	<80 mm Hg
femoral artery	<70 mm Hg
carotid artery	<60 mm Hg

TREATMENT

1. Perform primary assessment while protecting the airway with appropriate maneuver.
2. Control external bleeding by direct pressure or pressure points.
3. Administer **OXYGEN** with the highest-concentration device tolerated; assist ventilations as necessary.
4. If respiratory or ventilatory problems arise, follow the *Airway Management and Respiratory Support* protocol.
5. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.
6. Attempt to determine cause of shock:
 - 6.1 If shock is secondary to trauma: transport as soon as possible; contact Medical Control; and follow the *Trauma* protocol. Elevate patient's legs, unless contraindicated.
 - 6.2 If shock is secondary to anaphylaxis (eg: bee sting allergy), follow the *Anaphylaxis* protocol; then continue, below. Elevate patient's legs, unless contraindicated.

Quick Reference

Primary Survey


Control bleeding




High conc O₂

Physical Exam & Vital Signs

Trauma

Anaphylaxis

7. Consider use of pneumatic anti-shock garment, following the PASG protocol.	(PASG)
<p>VALS PERSONNEL</p> <p>8. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the <i>RI EMS Ambulance Run Report</i>.</p> <p>9. Start a large bore IV of NORMAL SALINE or LACTATED RINGER'S solution:</p> <p>9.1 For all forms of shock <u>except cardiogenic</u>:</p> <p>9.1.1 Adult patients: administer IV "wide open" until there is an improvement in systolic BP to a value above 90 mm Hg; or until clinical signs of CHF develop.</p> <p>9.1.1.1 Start a second IV at a different site if transport time will be longer than 15 minutes.</p>	<p>Monitor ECG</p> <p>IV: NS or LR</p>
 <p>9.1.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): Administer fluid boluses of 20 mL/kg/dose by rapid IV push. Reassess patient after each dose, and repeat boluses as necessary to achieve systolic BP above age-related hypotensive value (refer to table).</p> <p>9.1.2.1 For pediatric patients with evident or suspected intra-abdominal injury, attempts to start IVs should be made above the diaphragm.</p> <p>9.1.2.2 Start a second IV if transport time will be longer than 15 minutes.</p>	
<p>9.1.3 If unable to establish an IV in ≤ 2 attempts, (<5 minutes) transport the patient to a <u>HOSPITAL EMERGENCY FACILITY</u>. Any further attempt at IV placement must occur en route.</p>	

▽ ALS PERSONNEL		
9.2 For cardiogenic shock :		
9.2.1 Adult patients: administer NORMAL SALINE or LACTATED RINGER'S solution at KVO (20–30 mL/hour).		
9.2.1.1 Start a second IV at a different site if transport time will be longer than 15 minutes.		
	9.2.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): Administer NORMAL SALINE or LACTATED RINGER'S solution at KVO (10–20 mL/hour).	
9.2.2.1 Start a second IV at a different site if transport time will be longer than 15 minutes.		
9.2.3 If unable to establish an IV in ≤ 2 attempts, (<5 minutes) transport the patient to a <u>HOSPITAL EMERGENCY FACILITY</u> . Any further attempt at IV placement must occur en route.		
9.2.4 Consider a fluid challenge of NORMAL SALINE or LACTATED RINGER'S solution IV:		(NS or LR: Fluid challenge)
9.2.4.1 Adult patients: administer 500 mL "wide open" until there is an improvement in systolic BP to a value above 90 mm Hg; or until clinical signs of CHF develop.		
	9.2.4.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer fluid boluses of 20 mL/kg/dose by rapid IV push. Reassess patient after each dose, and repeat boluses as necessary to achieve systolic BP above age-related hypotensive value (refer to table).	
9.3	EMT-Ps only : may administer DOPAMINE HCl by IV infusion as indicated below. EMT-Cs may administer DOPAMINE HCl by IV infusion with authorization from Medical Control, as indicated below.	(Dopamine)
9.3.1 Adult patients: administer DOPAMINE HCl (400 mg in 250 mL D ₅ W or NS) and titrate the rate to achieve a systolic blood pressure >90 mm Hg.		
	9.3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): administer DOPAMINE HCl as indicated on Broselow [®] Tape, at 5–20 mcg/kg/min IV, and titrate the rate to achieve a systolic blood pressure above age-related hypotensive value (refer to table).	(Dopamine per Broselow [®] Tape)

▽ ALL EMTs

- | | |
|----------------------------------------------------------------------------------------------|--------------------|
| 10. Contact Medical Control. | <i>Med Control</i> |
| 11. Transport the patient without delay to a <u>HOSPITAL EMERGENCY FACILITY</u> . | <i>Transport</i> |
| 12. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> . | <i>Document</i> |

SPECIALIZED PATIENT CARE

RECOGNITION

1. A patient who needs specialized healthcare should have an Emergency Care Plan developed in conjunction with their physician and filed with the Department of Health. The patient should make the plan available to responding EMS providers through various means and the EMS provider should refer to the treatment described in the Emergency Care Plan.
2. If an Emergency Care Plan is not provided, then a patient who needs specialized care may be recognized through the presence of equipment, medications or other circumstances not familiar to the EMT through training or protocol.

TREATMENT – EMERGENCY CARE PLAN PRESENT

1. An Emergency Care Plan should be sought in patients with observed need for specialized care. The Plan may be referred to in bracelet, wallet card or other EMS notification. It must include:
 1. Patient identification, including photograph
 2. A brief description of the patient's specialized care needs
 3. Instructions for care in anticipated emergency situations
 4. Reference numbers for further information
 5. Filing and effective date from the Department of Health
2. The EMS provider should follow the Emergency Care Plan. While reviewing the Plan, CONTACT MEDICAL CONTROL and other references noted in the Plan. MEDICAL CONTROL should be requested to provide guidance and an explanation of equipment and medications referenced in the Emergency Care Plan. If available, attempt to contact or locate the person most knowledgeable about the patient's specialized health care needs.
3. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY, maintaining contact with MEDICAL CONTROL. In transporting the patient, keep the Emergency Care Plan with the patient. If available, transport should include the person most knowledgeable about the patient's specialized health care needs.
4. Document all incident information by completing the RI EMS Ambulance Run Report.

QUICK REFERENCE

EMERGENCY CARE PLAN?

-IDENTIFICATION
-DESCRIPTION
-INSTRUCTION
-REFERENCE
-FILED WITH DOH

FOLLOW PLAN

MED CONTROL

TRANSPORT

DOCUMENT

TREATMENT – NO EMERGENCY CARE PLAN

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 1. <u>CONTACT MEDICAL CONTROL.</u> Attempt to contact or locate the person most knowledgeable about the patient's specialized healthcare needs in order to obtain advice during the care and transport process. | NO EMERGENCY CARE PLAN? |
| 2. If the patient is attached to portable special medical equipment that appears to be working properly, transport it with the patient. | MED CONTROL |
| 3. If the patient is attached to specialized medical equipment that is either too large to transport or does not appear to be working properly, disconnect it as safely as possible from the patient and provide alternative support as indicated. | EQUIPMENT OK?
TRANSPORT WITH PATIENT |
| 4. If a patient has a specialized health care need not related to equipment, follow the instructions of the person most knowledgeable with the advice of MEDICAL CONTROL in providing treatment and transport. | EQUIPMENT NOT OK?
DISCONNECT AND PROVIDE SUPPORT |
| 5. Transport the patient without delay to a <u>Hospital Emergency Facility</u> , maintaining contact with Medical Control. If available, transport should include the person most knowledgeable about the patient's specialized health care needs. | MED CONTROL |
| 6. Document all incident information by completing the RI EMS Ambulance Run Report. | DOCUMENT |

STROKE (CVA)

RECOGNITION

Unilateral paralysis, unilateral numbness, language disturbance, monocular blindness, vertigo or ataxia without impaired consciousness.

Note: If a patient is suspected of having a stroke, DO NOT ADMINISTER ASPIRIN; no further medications should be administered without contacting MEDICAL CONTROL.

TREATMENT

1. Perform initial assessment while protecting the airway.
2. If the patient has any impaired consciousness, follow the *Impaired Consciousness Protocol*.
3. Obtain vital signs and frequently reassess patient's condition.
4. Obtain history from patient, family and/or bystanders to include:
 - 4.1 When was the patient last known to be without symptoms?
 - 4.2 Did the patient have a seizure or head injury at the time of onset?
 - 4.3 Did the patient complain of a headache, neck pain or neck stiffness prior to onset?
 - 4.4 Did the patient undergo any recent surgery?
 - 4.5 Does the patient take any anticoagulant medications?
5. Perform the Prehospital Stroke Scale to determine treatment priority.
6. Transport the patient without delay to a HOSPITAL EMERGENCY FACILITY and CONTACT MEDICAL CONTROL. Every effort should be made to notify the receiving facility as soon as possible.
7. Administer **OXYGEN** with the highest concentration device tolerated, assist ventilation's as necessary.

Quick Reference

Initial Survey

LOC

Vital signs
Reassessment


Obtain History

? Onset
? Seizures/Trauma
? Headache
? Neck Pain or Stiffness
? Surgery
? Anticoagulants

Prehospital Stroke Scale

Transport
Med Control

High Concentration
O₂

▼ ALS PERSONEL		
8.	Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the <i>RI EMS Ambulance Run Report</i> .	Monitor/ECG
9.	Start an IV access device or an IV of NORMAL SALINE solution only. <i>Attempts should occur during transport.</i>	
9.1	Adult patients: start an IV of NORMAL SALINE solution at KVO (20-30 ml/hr).	IV Normal Saline
 9.2	Pediatric Patients < 5 feet tall (<35kg/75 lbs.): Start an IV of NORMAL SALINE solution at KVO (10-20 ml/hour).	
10.	Draw a sample of the patient's blood for blood glucose (bG) analysis. This may be done while starting the IV.	Draw Blood
11.	If electronic glucose is available, determine blood glucose concentration. Patients with bG < 60 mg/dl, as determined by electronic glucose meter, refer to the <i>Impaired Consciousness Protocol</i> .	Check Blood Glucose
▼ ALL EMTS		
12.	Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> .	Document

Trauma

PRINCIPLES

1. Rapid initial assessment is essential. Access to the patient for the initial assessment and initial treatment should take precedence over complete extrication.
2. Transport should always occur as soon as possible after immobilization (ideally, in less than 10 minutes at the scene). Further treatment should be given en route.

TREATMENT

Quick Reference

1. Stabilize the patient's neck and spine, and immobilize with cervical collar and spineboard as soon as possible.	<i>Immobilize ASAP</i>
2. Follow the <i>Airway Management and Respiratory Support</i> protocol to manage the airway and to ensure oxygenation and ventilation.	<i>Manage A-B-C</i>
2.1 Use the chin lift or jaw-thrust without head-tilt, taking care to avoid movement of the cervical spine.	<i>Modified jaw-thrust</i>
2.2 Clear upper airway manually or by suction, as necessary.	<i>(Suction)</i>
2.3 Administer OXYGEN with the highest-concentration device tolerated.	<i>High conc O₂</i>
2.4 If respirations are absent or ineffective, ventilate or assist, as needed.	<i>Ventilate</i>
2.5 Control bleeding by direct pressure. Do not remove penetrating objects, unless authorized by Medical Control.	<i>Pressure to stop bleeding</i>
3. If the patient is unconscious and pulseless, determine if the <i>Biological Death</i> or <i>Comfort One</i> protocol applies. If criteria for <i>Biological Death</i> or <i>Comfort One</i> protocol are <u>not</u> met, start basic life support and follow <i>Cardiac Arrest</i> protocol.	<i>R/O Biological Death and/or Comfort One</i>
4. Assess patient, obtain initial vital signs, and frequently reassess patient's condition.	<i>Physical Exam & Vital Signs</i>
5. Determine the patient's initial trauma score. Refer to <i>Revised Trauma Score (Adult)</i> and <i>Trauma Score (Pediatric)</i> tables.	<i>Trauma score</i>
5.1 Transport without delay and <u>contact Medical Control</u> as soon as possible.	<i>Transport early; Med Control</i>
5.2 Adult patients: If the trauma score <11, or the patient's "situation of injury" includes any of the trauma factors identified on the <i>RI EMS Ambulance Run Report</i> , and you are <u>within</u> 20 minutes' transport time of Rhode Island Hospital Trauma Center: transport to Rhode Island Hospital ED, unless an airway emergency exists. If an airway emergency exists follow the <i>Airway Management and Respiratory Support</i> protocol.	<i>Adult RTS <11 or trauma factors, transport time 20 minutes: transport to RIH ED</i>
5.2.1 If the scene time and/or transport time will be prolonged, and a landing site is available, consider transport by air ambulance from the scene to an appropriate trauma center. Follow the <i>Air Ambulance</i> protocol.	<i>Consider air ambulance to trauma center</i>
5.2.2 If you are <u>beyond</u> 20 minutes' transport time of Rhode Island Hospital Trauma Center: transport to the nearest <u>HOSPITAL EMERGENCY FACILITY</u> .	<i>Transport time >20 minutes: nearest ED</i>



5.3 If a pediatric patient's trauma score ≤ 10 transport without delay and contact Medical Control as soon as possible.

*Pedi TS ≤ 10 :
Med Control*

5.4 Pediatric patients <5 feet tall (<35 kg/75 lbs): If the pediatric trauma score <9, or the patient's "situation of injury" includes any of the trauma factors identified on the *RI EMS Ambulance Run Report*, and you are within 20 minutes' transport time of Hasbro Children's Hospital, transport to Hasbro Children's Hospital ED, unless an airway emergency exists. If an airway emergency exists follow the *Airway Management and Respiratory Support* protocol.

*Pedi TS <9 or
trauma factors,
transport time
 ≤ 20 minutes:
Hasbro Children's
Hospital ED*

5.4.1 If the scene time and/or transport time will be prolonged, and a landing site is available, consider transport by air ambulance from the scene to Hasbro Children's Hospital ED or another appropriate pediatric trauma center. Follow the *Air Ambulance* protocol.

*Consider air
ambulance to
pediatric trauma
center*

5.4.2 If you are beyond 20 minutes' transport time of Hasbro Children's Hospital, transport to the nearest HOSPITAL EMERGENCY FACILITY.

*Transport time
>20 minutes:
transport to
nearest ED*

6. Transport the patient without delay to an appropriate HOSPITAL EMERGENCY FACILITY and contact Medical Control en route.

Transport

7. If the patient is pregnant, and no contraindications exist, elevate the patient's right side (or tilt spineboard to the left) during transport.

*? Pregnant pt:
tilt board to left*

8. If signs of shock are present, priority should be given to early contact with Medical Control, and to rapid transport to the appropriate facility. Follow the *Shock* protocol en route.

*? Shock:
treat en route*

8.1 Apply and inflate the Pneumatic Anti-Shock Garment, following the *PASG* protocol.

PASG

▽ ALS PERSONNEL

8.2. Start at least one large bore IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution:


IV: NS or LR

8.2.1 Adult patients: administer IV "wide open" until there is an improvement in systolic BP to a value >90 mm Hg; or until clinical signs of CHF develop.

Wide open

8.2.1.1 Start a second IV at a different site if transport time will be longer than 15 minutes.

Additional IV

▽ ALS PERSONNEL	
 <p>8.2.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): Administer fluid boluses of 20 mL/kg/dose, by rapid IV push. Reassess patient after each dose, and repeat boluses as necessary to achieve systolic BP above age-related hypotensive value (refer to table).</p> <p>8.2.2.1 For pediatric patients with evident or suspected intra-abdominal injury, attempts to start IVs should be made above the diaphragm.</p> <p>8.2.2.2 Start a second IV at a different site if transport time will be longer than 15 minutes.</p>	<p>20 mL/kg/dose</p> <p>IV sites above diaphragm</p> <p>additional IVs</p>
9. Place the patient on a cardiac monitor. Observe and record the initial ECG rhythm, and any rhythm changes. Attach a copy of the initial rhythm strip to the hospital copy of the <i>RI EMS Ambulance Run Report</i> .	Monitor ECG

▽ ALL EMTs	
10. Continue further therapy as indicated below for specific injuries.	
11. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> .	Document

Further Treatment of Chest Trauma

1. Administer OXYGEN with the highest-concentration device tolerated; assist ventilations as necessary.	High conc O ₂ (Ventilate)
2. Flail chest (paradoxical movement of a portion of the chest wall)	Flail segment
2.1 Position patient with injured side down, unless contraindicated.	injured side down
2.2 Provide manual stabilization of the flail segment; or splint, as needed.	stabilize flail
3. Open pneumothorax (sucking wound)	Open Pneumo
3.1 Close on three sides by any appropriate means available (eg: gauze pad with Vaseline®; plastic wrap; defibrillator pad; etc.)	occlusive dressing
3.2 Monitor the patient closely for evidence of developing tension pneumothorax.	monitor: Tension pneumo
4. Tension pneumothorax (increasing ventilatory impairment; distended neck veins; absent breath sounds with hyper-resonance on one side of the chest; tracheal deviation away from the side without breath sounds)	? Tension pneumothorax
4.1 If present following closure of a sucking chest wound, remove the dressing to convert it to a simple open pneumothorax again.	lift occlusive dressing
4.2 EMT-Ps only may attempt pleural decompression.	(Pleural decomp.)


Further Treatment of Abdominal Trauma

1. Closed (Blunt)	<i>Closed</i>
1.1 Place patient supine with legs elevated, with flexion at hips and knees, unless contraindicated.	<i>Flex hips and knees</i>
2. Open (Penetrating)	<i>Open</i>
2.1 Place patient supine with legs elevated, with flexion at hips and knees, unless contraindicated.	<i>Flex hips and knees</i>
2.2 Cover wound with sterile dressing, and stabilize any impaled object.	<i>DSD</i>
2.2.1 Moisten sterile dressing with sterile saline, if evisceration is present.	<i>Moisten with sterile saline</i>

Further Treatment of Head/Spinal Injuries

1. Establish airway, and maintain with appropriate maneuver, following the <i>Airway Management and Respiratory Support</i> protocol.	<i>Airway</i>
2. Stabilize neck and spine with cervical collar and spineboard as soon as possible.	<i>Stabilize C-spine</i>
3. Control scalp bleeding by direct pressure unless obvious fracture of skull is present.	<i>Control bleeding</i>
4. Assess the patient's neurologic status using the AVPU method or Glasgow Coma Scale , and repeat en route.	<i>Neuro exam</i>
5. For an unconscious patient, hyperventilate with high-concentration OXYGEN , following the <i>Airway Management and Respiratory Support</i> protocol.	<i>Hyperventilate</i>


▽ **ALS PERSONNEL**

6. Maintain IV of NORMAL SALINE or LACTATED RINGER'S solution as indicated below:	<i>Head injury without shock: reduce IV fluids to KVO</i>
6.1 Adult patients: In the absence of shock, reduce NORMAL SALINE or LACTATED RINGER'S IV to KVO rate (20–30 mL/hour). If there is evidence of shock, administer IV fluid "wide open".	
 6.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): In the absence of shock, reduce NORMAL SALINE or LACTATED RINGER'S IV to KVO rate (10–20 mL/hour). If there is evidence of shock, administer boluses of 20 mL/kg/dose by rapid IV push.	

Further Treatment of Extremity Trauma (amputation, fracture)

1. Document any unusual circumstance involving the injury (eg: gross contamination, or movement from the original position prior to your arrival) by completing the <i>RI EMS Ambulance Run Report</i> .	<i>Document unusual circumstances</i>
2. Cover open (compound) fractures or amputation stumps with sterile dressings and then immobilize the limb. Elevation of an immobilized extremity is often helpful in controlling bleeding.	<i>Apply sterile dressings to open wounds</i>
3. Immobilize an apparent fracture, dislocation, or amputation in the position found with appropriate splinting devices, unless:	<i>Immobilize in position found, unless:</i>
3.1 there are no pulses distal to injury site. <u>Contact Medical Control</u> if distal pulses are absent. Medical Control may authorize movement of the extremity.	<i>no distal pulses</i>
3.2 the extremity is angulated and interferes with safe transport.	<i>angulated</i>
3.3 there is an apparent fracture of the shaft of the femur.	<i>shaft of femur</i>
3.3.1 Adult patients: apply a traction splint.	
3.3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): apply a pediatric traction splint, if available.	
4. Place amputated parts in a sterile dressing moistened with STERILE SALINE . Place the dressing that contains the amputated part(s) in a towel or a plastic bag, then on an ice pack, if available. <u>Do not place the amputated parts directly on ice or in any liquids.</u>	<i>Preserve amputated parts</i>

▽ **ALS PERSONNEL**

5. Maintain IV of NORMAL SALINE or LACTATED RINGER'S solution as indicated below:	<i>Long bone fx: IV therapy</i>
5.1 Start IV(s) in uninvolved extremities, or proximal to fracture sites (in cases of multiple fractures).	
5.1.1 Adult patients: In the absence of shock, reduce NORMAL SALINE or LACTATED RINGER'S IV to KVO rate (20–30 mL/hour). If there is evidence of shock, administer IV fluid “wide open”.	
 5.1.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): In the absence of shock, reduce NORMAL SALINE or LACTATED RINGER'S IV to KVO rate (10–20 mL/hour). If there is evidence of shock, administer boluses of 20 mL/kg/dose by rapid IV push.	

Further Treatment of Eye Trauma

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none">1. Check for pain, loss of vision, and eye muscle function (side-to-side and up-and-down motions of the eyes).2. Manage eye trauma by:<ol style="list-style-type: none">2.1 Irrigation of chemical or small foreign body injuries for at least 15 minutes, using at least 500 mL of LACTATED RINGERS or NORMAL SALINE.2.2.1 EMT-Ps only: for <u>chemical or small foreign body injuries only</u>, may instill PROPARACAINE HCl 0.5% solution, 1–2 gtt into affected eye. May repeat every 5–10 minutes, to a maximum of 3 doses.2.2 Irrigation of liquid injuries (chemical or hot liquids) ONLY, trained personnel may use a soft contact lens-type irrigation system (Morgan Lens® or equivalent) using at least 500ml of LACTATED RINGERS or NORMAL SALINE.2.3 Protecting traumatized eye by applying an appropriate dressing and protective eye shield. <u>Do not apply pressure or dressings to the eyeball (globe) directly.</u>2.4 Covering both eyes, to limit sympathetic movement of the injured eye.3. Document the type of injury (eg: contusion, laceration, chemical, foreign body) by completing the <i>RI EMS Ambulance Run Report</i>. | <p>Examine eye and vision</p> <p>Eye care:</p> <p>irrigation</p>

<p>dressing and shield</p> <p>cover both eyes</p> <p>Document</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|

Medications (Listed By Generic Names)

(INCLUDING OPTIONAL MEDICATIONS)

Generic Name (Familiar Chemical Name)		Common Trade Names
A	acetaminophen (APAP)	Tylenol®
	activated charcoal	Actidose®, Charcodote®
	adenosine	Adenocard®
	albuterol	Ventolin®, Proventil®
	antacid <i>(OPTIONAL FOR ALS UNITS)</i>	Mylanta®
	aspirin (ASA)	(aspirin)
	atropine (atropine sulfate)	(atropine)
B	bretylum (bretylum tosylate <i>(Optional for ALS Units)</i>)	Bretylol®
C	calcium chloride <i>(EMT-Ps Only)</i>	Calcium Chloride®
D	dextrose 25% (D25W, D25)	(25% dextrose)
	dextrose 50% (D50W, D50)	(50% dextrose)
	diazepam rectal gel preparation <i>(Optional for ALS Units)</i>	Diastat
	diazepam <i>(Optional for ALS Units)</i>	Valium®
	diltiazem <i>(EMT-Ps Only)</i>	Cardizem®
	diphenhydramine (diphenhydramine HCl) <i>[injectable]</i>	Benadryl®
	diphenhydramine (diphenhydramine HCl) <i>[oral]</i>	Benadryl®
	dopamine (dopamine HCl) <i>(Optional for ALS Units)</i>	Intropin®
E	epinephrine 1:10,000 (epinephrine HCl)	Adrenalin® 1:10,000
	epinephrine 1:1000 (epinephrine HCl)	Adrenalin® 1:1000
F	furosemide	Lasix®
G	glucagon <i>(Optional for BLS Units)</i>	(glucagon)
	glucose, oral <i>(Optional)</i>	Glucola®, Glucose®, InstaGlucose
I	ipepcac (syrup of ipecac)	(syrup of ipecac)
L	lidocaine (lidocaine HCl)	Xylocaine®
M	methylprednisolone <i>(Optional for ALS Units)</i>	Solu-Medrol®
	midazolam <i>(Optional for ALS Units)</i>	Versed®
	morphine (morphine sulfate, MSO4) <i>(Optional for ALS Units)</i>	(morphine)
N	naloxone (naloxone, HCl)	Narcan®
	nitroglycerine	Nitrobid®
	nitrospray <i>(Optional for ALS Units)</i>	Nitrobid®
O	oxygen (O2)	(oxygen)
P	phenobarbital (phenobarbital sodium) <i>(optional: EMT-Ps only)</i>	(phenobarbital)
	proparacaine HCl <i>(optional: EMT-Ps only)</i>	Ocu-Caine®, Ophthetac®
S	sodium bicarbonate (NaHCO3)	(sodium bicarbonate)
T	terbutaline (terbutaline sulfate) <i>(Optional for ALS Units)</i>	Brethine®, Bricanyl®
	thiamine (thiamine HCl)	(thiamine)
V	verapamil (verapamil HCl) <i>(EMT-Ps Only)</i>	Calan®, Isoptin®

Pediatric Drug Reference

Generic Name	Protocol	Initial Dose-Pediatric	Weight									
			5 kg	10 kg	15 kg	20 kg	25 kg	30 kg	35 kg			
A	acetaminophen	Seizures (Pedi)	15 mg/kg by suppository	#mg= 75	-3 mos	-1 year	2-3 yrs	4-6 yrs	7-9 yrs	10-11 yrs	12-14 yrs	
	activated charcoal	Poisoning and OD	1 gm/kg PO	#grams= 5								
	adenosine	SVT (Pedi), VT	0.1 mg/kg IV rapid push	#mg= 0.5								
	albuterol	Asthma, CHF	1.25-2.5 mg by nebulizer	#mg= 1.25								
	antacid (Mylanta)	Chest Pain in a Susp Cardiac Pt.	(30ml PO)	#ml=								
	atropine	Asystole, PEA	0.02 mg/kg IV push	#mg= 0.1								
	atropine	Bradycardia (Pedi)	0.02 mg/kg IV push	#mg= 0.1								
	brevonium	VF/VT, VT Stable/Unstable	5 mg/kg IV push	#mg= 25								
B	dextrose 25% (D25W)	Imp Consciousness, Sz (Pedi)	2 ml/kg (0.5gm/kg) IV*	#ml= 10								
	diazepam	Seizures (Pedi)	0.1-0.3 mg/kg IV*	#mg= 0.5-1.5								
	diazepam	Pain Management and Sedation	(0.05-0.2 mg/kg IV*)	#mg= 0.25-1.0								
	diastat	Seizures (Pedi)	0.5 mg/kg PR (round down)	#mg= 2.5								
	diphenhydramine	Anaphylaxis	1 mg/kg IV or IM or PO	#mg= 5								
	dopamine	Anaphylaxis, Shock	(5-20 mcg/kg/min)	mcg/min								
E	epinephrine 1:10,000	Asystole, PEA, VF/VT, Brady (pedi)	0.1 ml/kg IV push	#ml= 0.5								
	epinephrine 1:10,000	Anaphylaxis, Asthma	0.005-.020 ml/kg IV*	#ml= .03-.1								
	epinephrine 1:1,000	Anaphylaxis, Asthma	0.01 g/kg SQ, max=0.3 ml	#ml= 0.05								
	epinephrine 1:1,000	Airway Mgmt., Burns, Dyspnea	5.0 mg nebulized	#mg= 5								
F	furosemide	Congestive Heart Failure	1 mg/kg IV*	#mg= 5								
	glucagon	Imp Consciousness, Sz (Pedi)	0.1 mg/kg IM, SQ, max=1 mg	#mg= 0.5								
G	glucose (oral)	Sz (Pedi)	(<1 yr. Dose by Med Control)	#gm=								
I	ipecac (syrup)	Poisoning and Overdose	15 or 30 ml PO	#ml= 15								
L	lidocaine	Chest Pain in a Susp Cardiac Pt.	(1-1.5 mg/kg IV push)	#mg= 5-7.5								
	lidocaine	PVCs, VF/VT, VT Stable/Unstable	1-1.5 mg/kg IV push	#mg= 5-7.5								
M	methylprednisolone	Anaphylaxis, Asthma	1-2 mg/kg IV	#mg= 5-10								
	midazolam	Pain Management and Sedation, Sz	0.05-0.1mg/kg IV* or IM	#mg= 0.25-0.50								
	morphine	Burns-Chest Pain-CHF-Pain	(0.05 or 0.1 mg/kg IV*)	#mg= 0.25								
N	naloxone	Impaired Consciousness	0.1 mg/kg IV push, IM/SQ	#mg= 0.5								
	naloxone	Pain Management and Sedation	0.01 mg/kg IV push	#mg= 0.05								
	nitroglycerin	Chest Pain, CHF	(dose per Med Control)	#mg=								
P	phenobarbital	Seizures (Pedi)	(20 mg/kg IV*)	#mg= 100								
	proparacaine	Eye Trauma	1-2 gtt to affected area	N/A								
S	sodium bicarbonate	Asystole, PEA, VF/VT	(1 mEq/kg IV push)	#mEq= 5								
T	terbutaline	Asthma	0.01 mg/kg SQ, max=0.25 mg	#mg= 0.05								

Symbol: (dose, routes) requires medical control authorization * slow rate specified in protocol

Effective May 1, 2003 (R)

Air Ambulance (Helicopter)

1. An air ambulance may be called to the scene in severe trauma cases if scene and transport time will be prolonged, and a landing site is available. The air crew will determine which trauma center is appropriate to receive the patient.
2. An air ambulance may be called with authorization from Medical Control in cases of critical illness (eg: heart attack). The air crew will determine which specialized care center is appropriate to receive the patient.
3. The following air ambulance services are available for scene response: Their aircraft bases are noted to provide geographic reference, but estimated time of arrival to a request should be obtained by calling the individual service:

Air Ambulance Service	Telephone
Life Flight UMASS-Memorial (Worcester, Palmer, Massachusetts)	1-800-343-4354
Life Star (Hartford, Norwich, Connecticut)	1-800-221-2569
Med Flight (Burlington, Plymouth, Massachusetts)	1-800-233-8998

PROCEDURE

1. Contact air ambulance service. **Note:** If transport by air ambulance is to be undertaken, early contact with an air ambulance service is essential. Care of the patient should not be interrupted.
2. Select, prepare, and approach the landing site only as directed by the air ambulance service.
3. Identify a landing area with a minimum open space of 60 feet by 60 feet (100 feet by 100 feet for night landings).
4. Inform the air ambulance service of any obstacles at the landing site (trees, telephone lines, antennas, etc.).
5. Secure the landing area to prevent unauthorized persons from approaching the air ambulance.
6. Keep the landing zone clear of loose articles and hazardous debris, and protect the patient from rotor wash.
7. Keep well clear of the landing area when the air ambulance is approaching or taking off.
8. Do not approach the air ambulance unless requested by the flight crew.
9. If requested, approach within the pilot's field of vision.
10. Carry equipment horizontally, below your waist level; **never upright or over your shoulder.**
11. Follow the suggestions of the flight crew when assisting near the air ambulance.
12. **No smoking** in or within 50 feet of the air ambulance.

Cricothyrotomy [EMT-Ps only]

1. Indications: cricothyrotomy may be performed with authorization from Medical Control, and as a standing order if unable to contact Medical Control, in the following circumstances:
 - 1.1 for a patient with evidence of respiratory failure or apnea, when all other methods of opening and maintaining a patent airway have been attempted and have failed;
 - 1.2 when there is severe laryngeal trauma;
 - 1.3 when there is foreign body upper airway obstruction that cannot be removed with direct laryngoscopy.
2. Under no circumstances should transportation be delayed.
3. Unless contraindicated, place and maintain the patient's head in hyperextension to position the larynx as far anterior as possible.
4. Locate the cricothyroid membrane, between the thyroid and cricoid cartilages, and prepare the site with an antiseptic solution, using aseptic or sterile technique.
5. Surgical technique, for patients ≥ 8 years of age:
 - 5.1 Stabilize the site. Use a scalpel to make a small midline incision through the overlying skin.
 - 5.2 Within the surgical wound, use the scalpel to make a transverse incision through the cricothyroid membrane, taking care not to incise too deeply or too laterally.
 - 5.3 If necessary to widen the incision, invert the knife and rotate the handle.
 - 5.4 Insert an appropriate cannulating device (eg: tracheostomy or endotracheal tube) to maintain the patency of the surgical opening.
 - 5.5 Confirm placement and patency by observing chest rise with ventilation/inspiration; listening for air exchange through the surgical airway; and observing clinical improvements.
 - 5.6 Stabilize and secure the cannulating device.



6. Percutaneous ("needle") technique for patients < 8 years of age:
 - 6.1 Connect a 10 mL syringe to a large bore, over-the-needle catheter placement unit.
 - 6.2 Stabilize the site. While applying gentle suction to the syringe, angle the needle caudally, and puncture the skin and cricothyroid membrane.
 - 6.3 Confirm entry into the trachea by aspirating air. Advance the catheter while withdrawing the needle.
 - 6.4 Fit an adapter to the hub of the catheter (eg: a 3.0 or 3.5 mm ET tube adapter, or the barrel of a syringe).
 - 6.5 Confirm placement and patency by observing chest rise with ventilation/inspiration and observing clinical improvements.
 - 6.6 Apply intermittent positive-pressure or continuous high-flow oxygen, as indicated; pause for "passive exhalation" as indicated.
7. Stabilize and secure the cannulating device.
8. Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

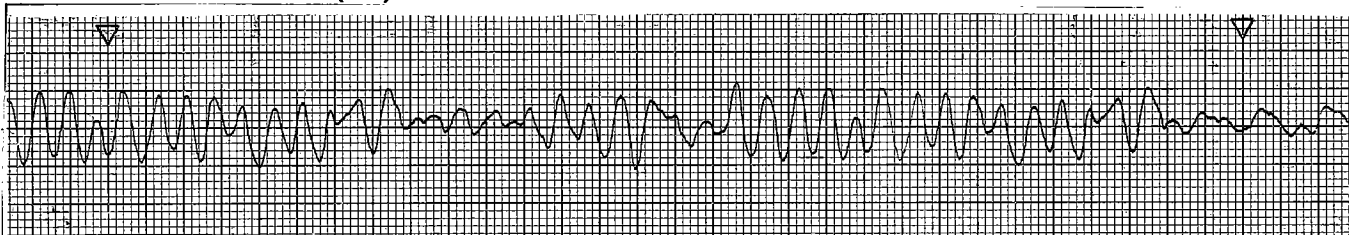
Defibrillation Procedure: AED

1. The following EMTs are authorized to perform automated external defibrillation during prehospital care:
 - 1.1 EMTs trained to use a semi-automatic or automatic external defibrillator (AED).
2. Use of fully automatic or semi-automatic defibrillators **without low energy levels (5–200 joules)** is permitted only for patients ≥ 8 years of age or whose weight is ≥ 25 kg/55 lbs.
3. Immediately upon arrival, verify cardiac arrest (absence of normal consciousness, normal respirations and carotid pulse).
4. Initiate CPR only if there is a delay in attaching the AED.
5. Initiate AED:
 - 5.1 Turn defibrillator power on (**Note:** recorder may be turned on separately).
 - 5.2 Begin verbal report, if applicable.
 - 5.3 Attach electrode pads.
 - 5.4 Clear the patient.
 - 5.5 Switch to “assess” mode.
 - 5.6 Follow directions of AED to deliver shocks.
6. If a pulse is restored after defibrillation, follow the *Chest Pain in a Suspected Cardiac Patient* protocol.
7. If a pulse is not restored, perform CPR for 1 minute.
 - 7.1 Deliver 3 additional shocks as outlined in steps 5.1–5.6.
8. If a pulse is restored after the second series of defibrillations, follow the *Chest Pain in a Suspected Cardiac Patient* protocol.
9. If a pulse is not restored after defibrillation, follow the *Cardiac Arrest* protocol.
10. Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

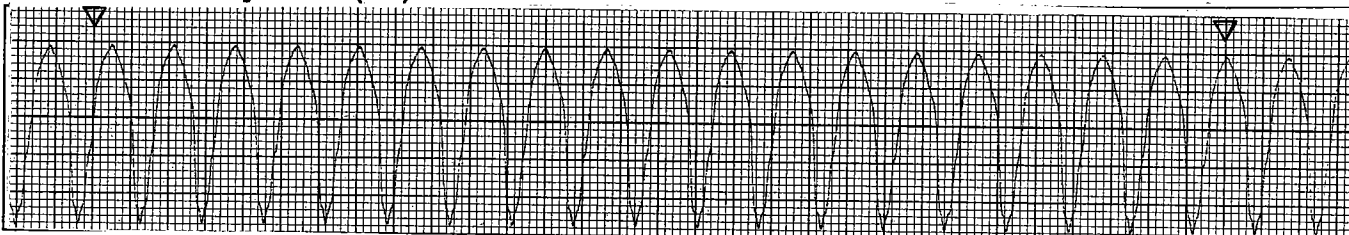
Safety Consideration: Stop the vehicle prior to all defibrillations.

Defibrillation Procedure: Manual Defibrillation

Ventricular Fibrillation (VF)



Ventricular Tachycardia (VT)



Recognition: Unresponsive, Apneic, Pulseless Patient

PROCEDURE

1. Only EMTs who are trained and currently licensed/certified by the RI Department of Health to use a manual defibrillator may perform manual defibrillation during prehospital care.
 - 1.1 Use of defibrillators **without low energy levels (5–200 joules)** is permitted only for patients ≥ 8 years of age or whose weight is ≥ 25 kg/55 lbs. Use standard (adult) size paddles for all patients who weigh more than 10 kg (~25 lbs); use "pedi" (ie: infant) paddles only for patients who weigh less than 10 kg/25 lbs (about 1 year of age).
2. Check the pulse. Defibrillate only if the pulse is absent and the rhythm is ventricular fibrillation (VF) or ventricular tachycardia (VT).
 - 2.1 Record initial ECG rhythm and attempted defibrillations; attach copies of the rhythm strips to the hospital copy of the *RI EMS Ambulance Run Report*, as part of required documentation.
3. Immediately defibrillate, with up to three shocks in a row, as indicated below:
 - 3.1 Adult patients:
 - 3.1.1 Shock at **200 joules**.
 - 3.1.2 Check pulse and identify rhythm. If VF/VT persists, re-shock at **300 joules**.
 - 3.1.3 Check pulse and identify rhythm. If VF/VT persists, re-shock at **360 joules** (maximum energy).



3.2 Pediatric patients <5 feet tall (<35 kg/75 lbs):

3.2.1 Shock at **2 joules/kg** (~1 joule/lb).

3.2.2 Check pulse and identify rhythm. If VF/VT persists, re-shock at **4 joules/kg** (~2 joules/lb).

3.2.3 Check pulse and identify rhythm. If VF/VT persists, re-shock at **4 joules/kg** (~2 joules/lb).

4. If the pulse is restored after defibrillation, follow the *Chest Pain in a Suspected Cardiac Patient* protocol.
 - 4.1 If the pulse is restored and VF or pulseless VT recurs, defibrillate adult patients at 360 joules. For pediatric patients, reshock at 4 joules/kg (~2 joules/lb) up to three times en route. (Check for a pulse between defibrillations.)
5. If a pulse is not restored after defibrillation, follow the *Cardiac Arrest* protocol.
6. Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

Safety Consideration: Stop the vehicle prior to all defibrillations.

EMS Scene Photographs (Optional Procedure)

Purpose:

Research shows that there is a direct correlation between severity of injury to car crash trauma patients and the amount and type of motor vehicle damage. This damage provides invaluable information about the mechanism of injury and can help medical personnel better diagnose and treat a victim's injuries.

Procedure:

1. EMS personnel respond to call.
2. Provide patient care per protocol and transfer patient to rescue/ambulance.
3. Photograph maximum points of impact.
4. Photograph interior specifically where patient was located. **DO NOT PHOTOGRAPH THE PATIENT.**
5. Continue care and transport patient without delay to a HOSPITAL EMERGENCY FACILITY.
6. Complete *RI EMS Ambulance Run Report*, and attach photos to the hospital copy.
7. Present *RI EMS Ambulance Run Report* and attached photos to medical personnel.
8. Check film status in camera and reload film if necessary.

Endotracheal Intubation

- Only EMTs who are licensed/certified by the RI Department of Health to perform endotracheal intubation may perform endotracheal intubation during prehospital care. **EMT-Ps only** may attempt to intubate newborns (infants <1 month of age).
- Use the following guidelines to select the appropriate size tube. When using cuffed endotracheal tubes, check to ensure that the cuff is intact, and does not leak air.

2.1 Adult Patients ≥ 16 years of Age

Gender	Age	Endotracheal Tube Size
Male	≥ 16 years of age	8.0 mm
Female	≥ 16 years of age	7.0 mm



2.2 Pediatric Patients (Toddlers–Children <35 kg/75 lbs)

Use the endotracheal tube size recommended by the Broselow[®] tape. If the tape is unavailable, use the following formula to determine the correct size:

$$\begin{aligned} \text{ETT size (mm ID)} &= \frac{\text{age (in years)}}{4} + 4 \\ \text{Example:} \\ \text{ETT size for 6 year old} &= \frac{6}{4} + 4 \\ &= 1.5 + 4 \\ &= 5.5 \\ &\quad \text{5.5 mm ID} \end{aligned}$$

2.2 EMT-Ps only: Newborn Patients (Premature–Full Term Infants)

<u>Approximate Weight</u>	<u>Gestational Age</u>	<u>Endotracheal Tube Size</u>
<1500 grams (1.5 kg)	<30 weeks	2.5 mm
1500–2500 grams	30–36 weeks	3.0 mm
>2500 grams	>36 weeks	3.5 mm

- If using a stylette, it should be placed inside the tube to one-half inch from end. It must not protrude beyond the end of the tube.
- Prior to intubation, hyperventilate and hyperoxygenate the patient whenever possible. Suction equipment should be available during intubation, and used to remove debris when necessary.
- Unless C-spine trauma is suspected, place the patient in the "sniffing position": the neck is flexed (to elevate the occipital region), and the head is hyperextended. Insert the laryngoscope with the left hand. Place the blade to the right of the midline and push the tongue to the left, so that the blade rests in the midline.
 - If C-spine trauma is suspected, an assistant should maintain the patient's head in the neutral anatomical position and perform a jaw thrust to open the patient's mouth. Attempt to intubate with care, to avoid moving the patient's head or neck.

6. Slowly advance the blade. A curved blade should enter the vallecula; a straight blade should rest beneath the epiglottis. Exert gentle traction upward; do not use the teeth for a fulcrum.
7. Visualize the vocal cords and insert the appropriate size endotracheal tube. Use the right hand to guide the tube from the right side of the mouth into the midline, and pass the tube through the vocal cords. This procedure may be attempted twice. Each intubation attempt should not take more than 30 seconds. A second person should time the procedure and call out when 30 seconds have passed. After an unsuccessful attempt resume ventilation with a bag-valve-mask device using high flow **OXYGEN**. Any further attempt at endotracheal intubation requires the approval of Medical Control and must be undertaken while en route.
8. If a cuffed tube is used, inflate the cuff with enough air to occlude back flow when ventilating the patient.
9. Check the position of the tube by listening for breath sounds as the patient is ventilated; observe the chest for a rise and fall with ventilations. Check both sides of chest to be sure the tube is not too far down and possibly in the right main stem bronchus. Also, listen over stomach to check that the tube is not in the esophagus. Use an endotracheal tube placement verification device (Easy-Cap®, Tube-Check®, or end-tidal carbon dioxide detector) to confirm endotracheal placement.
10. Insert an oropharyngeal airway or other appropriate device as a bite-block to protect the tube. Secure the tube to prevent displacement and stabilize the head to prevent neck motion that may dislodge the endotracheal tube.
11. With an endotracheal tube in place, a qualified EMT must be in attendance, continuously managing the airway.

ALS PERSONNEL

12. Medications may be administered through the endotracheal tube, as indicated in the *RI EMS Prehospital Care Protocols and Standing Orders*, using one of the following techniques. For medications to be administered through the ET tube, use 2.0–2.5 times the usual IV dose.
 - 12.1 Dilution technique:
 - 12.1.1 Adult patients: Add enough **NORMAL SALINE** to the medication to make a total volume of 10 mL. Inject the diluted medication down the ET tube.
 - 12.1.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): Add enough **NORMAL SALINE** to the medication to make a total volume of 3–5 mL. Inject the diluted medication down the ET tube.
 - 12.2 Flush technique:
 - 12.2.1 Adult patients: Inject the medication down the ET tube, then inject 10 mL of **NORMAL SALINE** down the ET tube to flush the medication.
 - 12.2.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): Inject the medication down the ET tube, then inject 3–5 mL of **NORMAL SALINE** down the ET tube to flush the medication.
13. Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

Esophageal Obturator Airway (EOA)


1. Only EMTs who are trained and licensed/certified by the RI Department of Health to use the Esophageal Obturator Airway may insert an esophageal obturator airway during prehospital care.
2. Use the esophageal obturator airway (EOA) only in deeply unconscious patients without a gag reflex. This usually means cardiac arrest, but may occur in other settings of respiratory failure.
3. **Do not** use the EOA for any of the patients listed below:
 - 3.1 Conscious or semi-conscious patients.
 - 3.2 Children, and adult patients <5 feet tall.
 - 3.3 Patients known or suspected to have swallowed corrosive materials.
 - 3.4 Patients known or suspected to have diseases of the esophagus.
 - 3.5 Patients with inhalation burn injuries.
 - 3.6 Trauma patients.
4. Do not interrupt ventilation for more than 30 seconds to insert the EOA.
5. Whenever possible, hyperventilate the patient with **OXYGEN** prior to EOA insertion.
6. Never use force to insert the EOA.
7. Always check to see that the chest rises with ventilation efforts after insertion of the EOA, and re-check periodically thereafter.
8. Do not remove the EOA in the field unless the patient is breathing spontaneously.
9. If you do remove the EOA, be prepared for regurgitation with suction immediately available.
10. Procedure:
 - 10.1 Assemble EOA.
 - 10.2 Flex the head slightly.
 - 10.3 Grasp lower jaw and tongue between thumb and index fingers and lift upwards; or use head tilt but keep mouth open and do not hyperextend the neck.
 - 10.4 With the mask attached, insert tube into mouth and place so that the curvature of the tube is the same as the curvature of pharynx.
 - 10.5 Advance the tube into the esophagus and seal mask firmly over nose and mouth.
 - 10.6 Ventilate and see if chest rises.
 - 10.7 If the chest does not rise, remove the EOA. Ventilate with an alternate method and attempt reinsertion.
 - 10.8 Inflate obturator cuff with 30–35 mL of air.
 - 10.9 Ventilate with bag valve mask device to achieve chest rise.
 - 10.10 Listen for breath sounds bilaterally, with stethoscope.
 - 10.11 Listen for air escape over epigastrium with stethoscope.
 - 10.12 If air is escaping under the epigastrium, the EOA should be removed. Ventilate the patient with an alternate method, check the balloon for leaks and reinsert.
 - 10.13 Frequently recheck breath sounds with stethoscope.
 - 10.14 With an EOA in place, a qualified EMT must be in attendance, continuously managing the airway.
11. Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

Foreign Body Airway Obstruction

Unconscious patient

TREATMENT

Quick Reference

1. Follow the <i>Airway Management and Respiratory Support</i> protocol to clear and maintain a patent airway. Assist ventilation as necessary.	<i>Manage A-B-C</i>
1.1 Hyperextend neck and establish airway by chin lift or triple airway maneuver.	<i>Position airway</i>
1.1.1 If head/neck injury is present or suspected, perform jaw thrust without head tilt; extension is contraindicated.	<i>Modified jaw-thrust</i>
1.2 If the initial effort at inflation of the lungs is unsuccessful, clear any debris from oral cavity (well-fitting dentures excluded). Re-position the airway and again try to inflate the lungs.	<i>Clear and re-position airway</i>
2. If patient still cannot be ventilated, follow AHA guidelines:	
2.1 All patients ≥ 8 years of age: perform series of up to 5 abdominal (or chest) thrusts. Perform "finger sweep" of the mouth after each set of thrusts.	<i>Abdominal or chest thrusts</i>
 <p>2.2 Patients 1–8 years of age: Perform series of up to 5 abdominal (or chest) thrusts. <u>Do not perform blind "finger sweep"</u>.</p> <p>2.3 Patients <1 year of age: Perform series of up to 5 back blows, followed by series of up to 5 chest thrusts. <u>Do not perform blind "finger sweep"</u>.</p>	<p><i>Abdominal or chest thrusts</i></p> <p><i>Back blows, chest thrusts</i></p>
3. Attempt the sequence specified above for up to 1 minute. If ventilation is still impossible, attempt to ventilate by applying positive pressure by mouth-to-mask or bag-valve-mask device.	<i>Repeat up to 1 minute; ventilate</i>
4. EMTs trained and licensed/certified by the RI Department of Health to perform endotracheal intubation may utilize the laryngoscope and suction or long forceps to remove the obstructing foreign body if chest thrusts, finger sweep, and forceful ventilation are ineffective.	<i>(Laryngoscope and forceps or suction)</i>
4.1 If foreign body is removed and patient remains apneic, perform endotracheal intubation.	<i>(ET Intubation)</i>
5. EMT-Ps only: perform cricothyrotomy if unable to relieve obstruction or perform endotracheal intubation.	<i>(Cricothyrotomy)</i>
6. <u>Contact Medical Control.</u>	<i>Med Control</i>
7. Transport the patient without delay to the nearest <u>HOSPITAL EMERGENCY FACILITY</u> .	<i>Transport</i>
8. Document all incident information by completing the <i>RI EMS Ambulance Run Report</i> .	<i>Document</i>

Glasgow Coma Scale and "AVPU" Scale

Glasgow Coma Scale

EYES	Adult	Child	Infant	Score
	Open spontaneously during initial assessment.	Open spontaneously during initial assessment.	Open spontaneously during initial assessment.	4
	Open to verbal stimulus .	Open to verbal stimulus .	Open to verbal stimulus .	3
	Open only to painful stimulus .	Open only to painful stimulus .	Open only to painful stimulus .	2
	Do not open during initial evaluation period.	Do not open during initial evaluation period.	Do not open during initial evaluation period.	1
VERBAL	Adult	Child	Infant	Score
	Oriented to person, place, time.	Oriented to person, place, time.	Coos and babbles .	5
	Converses, but is disoriented or confused .	Converses, but is disoriented or confused .	Irritable cries .	4
	Disoriented ; speech clear, but inappropriate .	Disoriented ; speech clear, but inappropriate .	Cries to pain .	3
	Garbled . Includes grunting or moaning.	Garbled . Includes grunting, moaning, non-specific sounds.	Moans to pain .	2
	No verbal responses to any stimulation.	No verbal responses to any stimulation.	No verbal responses to any stimulation.	1
MOTOR	Adult	Child	Infant	Score
	Obeys verbal commands by moving extremities or facial muscles (if C-spine injuries).	Obeys verbal commands by moving extremities or facial muscles (if C-spine injuries).	Moves spontaneously and purposely .	6
	Can localize a painful stimulus by moving an extremity to an injured area in a purposeful manner.	Can localize a painful stimulus by moving an extremity to an injured area in a purposeful manner.	Withdraws to touch.	5
	Withdraws an extremity from painful stimulus, but unable to localize/prevent recurring pain.	Withdraws an extremity from painful stimulus, but unable to localize/prevent recurring pain.	Withdraws in response to painful stimulus.	4
	Abnormal flexor response to painful stimulus, ie: decorticate (flexion) posturing.	Abnormal flexor response to painful stimulus, ie: decorticate (flexion) posturing.	Abnormal flexor response to painful stimulus, ie: decorticate (flexion) posturing.	3
	Abnormal extensor response to painful stimulus, ie: decerebrate (extension) posturing.	Abnormal extensor response to painful stimulus, ie: decerebrate (extension) posturing.	Abnormal extensor response to painful stimulus, ie: decerebrate (extension) posturing.	2
	No response , no motion to any painful stimulus.	No response , no motion to any painful stimulus.	No response , no motion to any painful stimulus.	1

Glasgow Coma Score = "Eyes" score + "Verbal" score + "Motor" score:

"AVPU" Scale

A	=	Patient is conscious and alert .
V	=	Patient is responsive to verbal stimuli.
P	=	Patient is responsive to painful stimuli.
U	=	Patient is unresponsive to any stimuli.

Interfacility Transfer

Purpose

To clarify the staffing patterns, vehicle selection, and scope of authority of individuals attending patients during interfacility transfers.

Definitions**Infusion device:**

A commercial, electronically powered intravenous infusion pump/controller (eg: I-Med®, I-Vac®, Flo-Guard®, LifeCare®, Sigma®).

Interfacility transfer:

A patient transfer between licensed health care facilities.

EMT-A, EMT-B, EMT-I, EMT-C, EMT-P:

As defined in the *Rules and Regulations Relating to Emergency Medical Services (R23-4.1-EMS)*, Rhode Island Department of Health.

RN: A Rhode Island licensed Registered Nurse meeting the appropriate standards of care pertinent to the patient's condition, as determined by the referring physician.

PA: A Rhode Island licensed Physician's Assistant meeting the appropriate standards of care pertinent to the patient's condition, as determined by the referring physician.

MD or DO:

A Rhode Island licensed physician or osteopath.

Referring Physician:

The physician at the point of origin of the transfer directly responsible for the patient's care.

Classification protocol

The patient classification shall be determined by the referring physician. The following system shall be used to define classes of patients with their respective minimum vehicle and personnel requirements:

- Class A:** Clearly and completely stable patients with minimal potential of decompensation en route. Example: patient with no running IV line, going for routine test. Staffing: EMT-A/B/I. Vehicle: BLS; Class: A-1, A-1A, A-2, B.
- Class B:** Stable as above with IV running, no medications in the fluids. Example: Cancer patient with maintenance fluids running. Staffing: EMT-A/B/I + EMT-C or EMT-P. Vehicle: ALS; Class: A-1, A-1A.
- Class C:** Has been stabilized as much as possible, but may suffer deterioration en route. Has no medications being administered or infusion devices in use which are beyond the scope of the assigned EMTs. Approved medications are listed in the *RI EMS Prehospital Care Protocols and Standing Orders*. Rate control devices within the scope of EMT practice include Dial-a-flow®. EMT-Cs and EMT-Ps who have successfully completed Department-approved IV infusion pump training may transport patients within this protocol. Example: Cardiac patient on LIDOCAINE drip who can be given sublingual NITROGLYCERIN for chest pain. Staffing: EMT-A/B/I + EMT-C or EMT-P, depending on medications. Vehicle: ALS; Class: A-1, A-1A.

Class D: Patient with acute medical problem who may become unstable en route. Requires administration of drugs not in the approved *RI EMS Prehospital Care Protocols and Standing Orders*. In addition, the patient may develop complications whose treatment is beyond the capabilities of the assigned EMTs. Example: ICU transfer with IV **NITROGLYCERIN** drip and receiving thrombolytic drug infusion en route. Staffing: EMT-A/B/I + EMT-C or EMT-P + RN, PA or MD. Vehicle: ALS; Class: A-1, A-1A.

EMT-Ps who have successfully completed Department-approved training in IV **NITROGLYCERIN** and IV anticoagulants may transport patients within this protocol. EMT-Cs and EMT-Ps who have successfully completed Department-approved IV infusion pump training may transport patients within this protocol.

In cases where an ALS unit is required and the hospital makes a reasonable effort to utilize an ALS unit and is unable to access one due to time constraints or patient condition, a BLS unit may be utilized, providing that appropriate supplies, equipment (refer to Addendum A), qualified staff and written/verbal orders have been provided.

Scope of Authority

Class A, B, or C transfers:

The EMT with the highest level of training will assume ultimate authority for patient treatment within the scope of the appropriate *RI EMS Prehospital Care Protocols and Standing Orders*. Medical Control shall assume such responsibility when called for by the respective Protocol.

Class D:

The ultimate authority rests with the referring physician, as defined above. If no physician is present during transport, the RN or PA shall assume ultimate authority for the case.

Notwithstanding the requirements of the regulations and the protocols, hospitals may elect to transport a patient with hospital staff. In such cases the hospital has ultimate authority for patient management providing written/verbal orders accompany the patient. In the absence of hospital staff, the EMT with the highest level of training will assume ultimate authority for patient treatment within the scope of the appropriate protocols. Medical Control shall assume such responsibility when called for by the respective Protocol.

Addendum A

1. Manual defibrillator unit with integral oscilloscope, strip chart recorder and synchronized cardioversion capability.
2. Sterile intravenous solutions of **NORMAL SALINE** and **LACTATED RINGER'S**, preferably in 500 mL plastic bags with administration kits, at least two (2) of each.
3. IV catheters, three (3) of each size: 14-16-18-20 gauge.
4. Supply of current medications authorized by the RI Department of Health, as listed below:

acetaminophen	dextrose 50% (D ₅₀ W)	glucagon	nitrospray
activated charcoal	diazepam Injectable	glucose, oral	oxygen
adenosine	diazepam rectal gel preparation	(syrup of) ipecac	phenobarbital sodium
albuterol	diltiazem	lidocaine HCl	phenytoin sodium *
antacid	diphenhydramine HCl oral	methylprednisolone (if available)	proparacaine HCl
aspirin	diphenhydramine HCl injectable	midazolam	sodium bicarbonate
atropine sulfate	dopamine HCl	morphine sulfate	terbutaline sulfate
bretylium tosylate (if available)	epinephrine 1:1,000	naloxone HCl	thiamine HCl
calcium chloride	epinephrine 1:10,000	nitroglycerin	verapamil HCl
dextrose 25% (D ₂₅ W)	furosemide		

* Dilantin for EMT-P interfacility maintenance use only.

5. Biohazardous Waste: Disposable sharps (hypodermic needles, etc.) should be placed in a container designed for such purpose.

IV Access and Admixtures [ALS]

1. General Principles

- 1.1 If unable to establish an IV before beginning to transport an adult patient within two (2) attempts or five (5) minutes, any additional attempts must be undertaken en route.



- 1.2 IV access may be difficult to obtain in infants and children, particularly those who are cold or in shock. Although many pediatric patients will benefit from prehospital intravenous (IV) therapy, establishing an IV should not unnecessarily delay transport. In general, IV attempts on scene should be limited to less than five minutes for stable patients, and two minutes for unstable patients; further attempts may be made en route.

- 1.3 Attempts to establish IVs for both adult and pediatric patients should be made in the peripheral veins of the upper extremities, whenever possible.

1.3.1 **EMT-Ps only** may attempt to establish an IV in the external jugular vein.

- 1.4 **NORMAL SALINE (NS)** and **LACTATED RINGER'S (LR)** solution are the IV fluids of choice for all prehospital patients.



- 1.4.1 Unless specifically ordered by Medical Control, **D₅W** should not be administered to pediatric patients.

- 1.5 The "keep vein open" (KVO) rate for adult patients is 20–30 mL/hour.



- 1.6 The "keep vein open" (KVO) rate for pediatric patients is 10–20 mL/hour.

- 1.7 Fluid challenges for adult patients should be administered as 250–500 mL boluses of **NORMAL SALINE** or **LACTATED RINGER'S** solution, administered as rapidly as possible, or as ordered by Medical Control.



- 1.8 Fluid boluses for pediatric patients should be administered as 20 mL/kg of **NORMAL SALINE** or **LACTATED RINGER'S** solution over 5-10 minutes, or as ordered by Medical Control.

- 1.9 For patients who have poor circulation or are in cardiac arrest, follow each dose of IV medication with a rapid flush of **NORMAL SALINE** or **LACTATED RINGER'S** solution, as indicated below.

- 1.9.1 Adult patients: flush with 20 mL of **NORMAL SALINE** or **LACTATED RINGER'S** solution.



- 1.9.2 Pediatric patients <5 feet tall (<35 kg/75 lbs): flush with ≥5 mL of **NORMAL SALINE** or **LACTATED RINGER'S** solution.

2. The medications listed in the following table may be administered by IV bolus and followed by an IV infusion ("drip"), as indicated in the *RI EMS Prehospital Care Protocols and Standing Orders*.

- 2.1 The table below also shows the recommended admixture ratios and yields for adult patients.

<i>Medication</i>	<i>Preparation</i>	<i>Yield</i>
BRETYLIUM	1 gm in 250 mL NS	4 mg/mL
DOPAMINE	400 mg in 250 mL NS	1600 <u>micrograms</u> /mL
EPINEPHRINE	1 mg in 250 mL NS	4 <u>micrograms</u> /mL
LIDOCAINE	1 gm in 250 mL NS	4 mg/mL



- 2.2 For pediatric patients <5 feet tall (<35 kg/75 lbs), the Broselow® tape provides rate and admixture information.

- 2.3 Procedure:

- 2.3.1 Contact Medical Control.
- 2.3.2 Identify medication to be given by name, dosage and route.
- 2.3.3 Set up new IV bag and drip regulation device.
- 2.3.4 Wipe injection site with antiseptic swab.
- 2.3.5 Recheck medication and dosage, inject it into IV bag while maintaining aseptic technique.
- 2.3.6 Admixtures are to be "piggy-backed" into an established IV of **NORMAL SALINE** or **LACTATED RINGER'S** solution.
- 2.3.7 A flow regulating mechanism (ie: infusion pump, rate control device) **must be used with all admixtures** to ensure accurate dosage administration and prevent excessive flow rates.
- 2.3.8 With special attention to maintaining proper infusion rate, the patient must be placed on a cardiac monitor, and vital signs must be re-assessed frequently during transport to a HOSPITAL EMERGENCY FACILITY.

3. Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

IV Access [EMT-Ps only]

1. Central Venous Cannulation

1.1 Central venous cannulation is indicated in any of the following circumstances:

- 1.1.1 when attempts to establish peripheral IV access are unsuccessful, for a patient in cardiac arrest;
- 1.1.2 after peripheral IV access is established for a patient in cardiac arrest;
- 1.1.3 with authorization from Medical Control.

1.2 Attempt to cannulate any of the central veins listed below:

- 1.2.1 internal jugular vein
- 1.2.2 femoral vein
- 1.2.3 subclavian vein

1.3 Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.



2. Intraosseous and umbilical venous access: Only those EMT-Ps who are trained and currently certified in a Pediatric Advanced Life Support program ("PALS **PLUS**") or the Neonatal (Newborn) Resuscitation Program (NRP), as conducted by the American Heart Association - Rhode Island Affiliate, may perform these procedures during prehospital care.

3. Intraosseous Infusion

- 3.1 Intraosseous (IO) infusion is indicated for children under 6 years of age with any of the following conditions, for whom attempts to establish IV access have been unsuccessful or are inappropriate:
 - 3.1.1 respiratory or cardiac arrest;
 - 3.1.2 shock with hypotension and/or impaired consciousness;
 - 3.1.3 with authorization from Medical Control.
- 3.2 Use of an IO infusion is contraindicated by trauma to, or infection of, the extremity under consideration, and by preexisting bone disease.
- 3.3 The intraosseous route for IV fluids and/or IV medications may be substituted for the intravenous route, whenever IV access is indicated.



3.4 Procedure:

- 3.4.1 Locate an appropriate site (usually the anteromedial surface of the proximal tibia, 1–3 cm inferior to the tibial tuberosity) and prepare the site with an antiseptic solution, using aseptic or sterile technique.
- 3.4.2 Use a commercially-available (eg: Cook or Sherwood) intraosseous cannulation device according to the manufacturer's instructions.
- 3.4.3 Penetrate the cortex of the bone, then remove the trocar or stylette. Attempt to aspirate blood or marrow, then flush with 5 mL of **NORMAL SALINE** or **LACTATED RINGER'S** solution. Check the site for evidence of infiltration, and re-check occasionally.
- 3.4.4 If there is no evidence of infiltration, connect IV administration set and infuse fluids and/or medications at the desired rate.
- 3.4.5 Stabilize and secure the IO device and IV tubing.

3.5 Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

4. Umbilical Venous Catheterization

4.1 Umbilical venous access is indicated for newborns who require resuscitation with medications or fluids which cannot be administered by the endotracheal route, and for whom attempts to establish IV or IO access have been unsuccessful.

4.2 Procedure:

- 4.2.1 Apply a ligature at the base of the cord to control bleeding, and locate the umbilical vein. Prepare the cord with an antiseptic solution, using aseptic or sterile technique.
- 4.2.2 Use a commercially-available umbilical catheter (or an IV catheter without a needle if nothing else is available). Attach a syringe, then flush and fill the catheter with **NORMAL SALINE** or **LACTATED RINGER'S** solution.
- 4.2.3 Introduce the catheter so that the distal tip is just deep to the abdominal wall. Aspirate blood to confirm placement, then flush with 1–2 mL of **NORMAL SALINE** or **LACTATED RINGER'S** solution.
- 4.2.4 Connect IV administration set and infuse fluids and/or medications at the desired rate.
- 4.2.5 Stabilize and secure the catheter and IV tubing.

4.3 Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

Mass Casualty Incident (Disaster)

OVERVIEW

1. Triage, or sorting of victims in a mass casualty incident, is performed several times by different people at different places. Each time victims are sorted, more sophisticated decisions can be made.
2. The major triage points are as follows:
 - Primary Triage –at position victim is found.
 - Secondary Triage –at treatment area on-site.
 - Tertiary Triage –at hospital door.
3. The treatment priorities of victims are:

First priority	(RED)	Severe injuries with shock, needing stabilization and treatment as soon as possible.
Second priority	(YELLOW)	Severe to moderate injuries requiring treatment soon, but shock not present.
Third priority	(GREEN)	Injuries requiring minor treatment; these patients could ride to the hospital in a bus.
Zero priority	(BLACK)	Obviously dead (dismembered, decomposed, etc.)
4. Each disaster scene presents its own unique hazards and difficulties. This plan is a general guide to the handling of mass casualty incidents. It should be understood that modifications will need to be made by command personnel on scene as such changes are needed.

DETAIL

1. PRIMARY TRIAGE

This first step in sorting of victims is begun by the EMT(s) arriving in the first rescue unit(s). The actual number of EMTs assigned to this task will depend on the size of the incident; selection of the individuals to do this will be done by the senior EMT acting as Secondary Triage (see below). The purpose of this level of triage is two-fold:

- 1.1 To prevent victims from dying of problems such as airway obstruction and/or hemorrhage.
- 1.2 To assign priorities for evacuation of victims from the positions found to the treatment area.

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2. SECONDARY TRIAGE

Victims should be evacuated from the primary site and be brought to the Secondary Triage position at the head of the treatment areas. Here, the Secondary Triage EMT *briefly* reevaluates the victims and assigns each to a treatment area; this triage may not agree with the tag color. One upper corner of the tag is also torn off and saved by the Secondary Triage EMT to help account for all the victims later.

A more advanced guide to victim severity is as follows:

0. Zero Priority (**Black**)

These victims have ceased both respirations and heartbeat and no EMT personnel are available to perform CPR without compromising the remainder of the victims.

1. First Priority (Red)

Respiratory distress.

Sucking and/or flail chest wounds.

Severe maxillofacial wounds.

Shock/severe bleeding.

Severe burns greater than 20 percent.

2. Second Priority (Yellow)

Abdominal injuries (without shock).

Genitourinary injuries.

Thoracic wounds without asphyxia.

Head Injuries/Cervical Spine Injuries.

Major fractures without shock.

Burns less than 20 percent (critical locations).

3. Third Priority (Green)

Soft tissue wounds.

Extremity fractures and dislocations.

Facial and eye injuries without airway difficulty.

General burns under 20 percent.

Psychological shock without agitation.

3. TRANSPORT TRIAGE

An individual should be appointed to this position by the Secondary Triage EMT if the scene is too large in scope for the Secondary Triage EMT to handle this function.

Medical Control at the Emergency Scene

1. Control of a medical emergency scene is the responsibility of the individual in attendance who is most appropriately trained and knowledgeable in providing prehospital emergency stabilization and transport.

2. If the patient's private physician is present and assumes responsibility for the patient's care:

The EMT should defer to the orders of the private physician. Local medical control should be contacted. The EMT reverts to following prehospital protocols and on-line medical direction at any time when the patient's private physician is no longer in attendance.

3. If a physician is present who is not the patient's physician and on-line medical direction by radio contact cannot be established:

An EMT on an emergency scene should relinquish responsibility for patient management when the physician has identified himself and has demonstrated his willingness to assume responsibility and document his intervention. When these conditions exist, the EMT should defer to the wishes of the physician on the scene. If the treatment at the emergency scene differs from that outlined in the prehospital protocols, the physician should agree in advance to accompany the patient to the hospital. However, in the event of a mass casualty incident or disaster, patient care needs may require the physician to remain at the scene.

4. If a physician is present who is not the patient's physician and on-line medical direction by radio contact does exist:

The on-line physician is ultimately responsible. If there is any disagreement between the physician at the scene and the on-line physician, the EMT should take orders from the on-line physician and place the intervenor physician in radio contact with the on-line physician.

The on-line physician has the option of managing the case entirely, working with the physician, or allowing him to assume responsibility.

5. Document all incident information by completing the *RI EMS Ambulance Run Report*.

Nasogastric/Orogastric Tube [EMT-Ps only]

1. Indications:
 - 1.1 impaired consciousness
 - 1.2 poisoning/overdose
 - 1.3 respiratory and cardiorespiratory arrest
 - 1.4 as ordered by Medical Control.
2. Contraindications to use of nasogastric tube: significant trauma to the head or face; suspected basilar skull fracture.
3. Procedure:
 - 3.1 Lubricate the distal tip of an appropriately-sized nasogastric/orogastric tube.
 - 3.2 Coach conscious patients to swallow as the tube is advanced to the stomach.
 - 3.3 Verify placement by auscultating the epigastrium, while injecting 15–30 mL of air into the tube.
 - 3.4 Stabilize and secure the tube.
 - 3.5 Withdraw and save a sample of gastric aspirate for analysis.
4. Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

Pleural Decompression [*EMT-Ps only*]

1. Indication: pleural decompression may be performed with authorization from Medical Control, and as a standing order if unable to contact Medical Control, for a patient with a suspected tension pneumothorax.
2. Procedure for needle thoracostomy:
 - 2.1 Locate the appropriate site for decompressing the affected hemithorax:
 - 2.1.1 the second or third intercostal space in the mid-clavicular line; or
 - 2.1.2 the fourth or fifth intercostal space in the mid-axillary line
 - 2.2 Prepare the site with an antiseptic solution, using aseptic or sterile technique.
 - 2.3 Connect a 10 mL syringe to a large bore, over-the-needle catheter placement unit.
 - 2.4 Stabilize the site. While applying gentle suction to the syringe, insert the needle over the superior border of the rib perpendicular to the chest wall, and puncture the skin.
 - 2.5 Advance the needle while applying gentle suction to the syringe. Confirm entry into the pleural space by aspirating air. Advance the catheter while withdrawing the needle.
 - 2.6 Confirm placement by observing clinical improvements.
 - 2.7 Fit a stopcock/syringe assembly or flutter valve to the hub of the catheter.
 - 2.8 Stabilize and secure the cannulating device.
3. Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

Pneumatic Anti-Shock Garment (PASG)

1. Indications for use of the PASG:
 - 1.1 Hypotension due to ruptured abdominal aortic aneurysm or similar abdominal hemorrhage
 - 1.2 Hypotension due to suspected pelvic fracture
 - 1.3 Anaphylactic shock
 - 1.4 Otherwise uncontrollable lower extremity hemorrhage
 - 1.5 Severe traumatic hypotension (shock) when the transportation time to a HOSPITAL EMERGENCY FACILITY is longer than five (5) minutes. For other patients, or in situations in which there is any cause for doubt, the EMT should contact Medical Control prior to inflation of the garment. **Do not delay transport to apply the garment.**
2. When used for shock, the garment should be inflated to produce a systolic blood pressure that exceeds the age-related hypotensive values shown in the table below:

Abnormal Vital Signs

Age		Systolic BP
Pre-School	(1–6 years)	<75
School Age	(6–12 years)	<85
Adolescent	(12–16 years)	<90
Adult	(≥16 years)	<90

NOTE:
absent radial
pulse may
indicate
hypotension

3. In most circumstances, the Pneumatic Anti-Shock Garment should be deflated slowly and only with an order from Medical Control. Deflation should occur while monitoring the blood pressure to insure that the blood pressure continues to be greater than the age-related value for hypotension.
 - 3.1 If evidence of pulmonary edema develops after inflation, deflate the garment immediately without requesting Medical Control authorization.
4. Contraindications to use of the PASG:
 - 4.1 Adjunct to CPR
 - 4.2 Penetrating chest injury
 - 4.3 Pulmonary edema
 - 4.4 Isolated extremity injury or fracture without shock
 - 4.5 Acute myocardial infarction, cardiac tamponade or cardiogenic shock
 - 4.6 Pregnancy
5. In other situations, if use is considered, contact Medical Control.

6. Inflation Procedure:

- 6.1 Assess patient for shock and record sign/symptoms. If spinal injury is suspected, maintain spinal immobilization.
- 6.2 Determine the patient's blood pressure by palpation or auscultation.
- 6.3 Auscultate breath sounds.
- 6.4 Check patient for bulky/sharp objects in pockets or remove clothing from patient's abdomen and lower extremities.
- 6.5 Open trouser and arrange garment.
- 6.6 Apply garment:
 - 6.6.1 Log roll patient, maintaining spinal immobilization.
 - 6.6.2 Locate the superior edge of garment just below the lower margin of the ribs.
 - 6.6.3 Attach the Velcro® straps with maximum contact, in order to fasten the garment securely.
 - 6.6.4 Attach inflation pump lines to garment and open all in-line valves.
- 6.7 Inflate garment as follows:
 - 6.7.1 When used as indicated, inflate all compartments simultaneously to produce a level of consciousness and/or vital signs that are within normal limits, as identified in the following table, or until fully inflated per garment specifications.

Normal Vital Signs

Age		Respiratory Rate	Heart Rate	Systolic BP	NOTE:
Pre-School	(1–6 years)	16–40	70–160	>75	absent radial pulse may indicate hypotension
School Age	(6–12 years)	12–30	60–140	>85	
Adolescent	(12–16 years)	10–24	60–120	>90	
Adult	(≥16 years)	10–24	60–120	>90	

- 6.8 Close all in-line valves.
 - 6.9 Frequently reassess and record blood pressure, pulse, breath sounds, respiratory rate, and patient's level of consciousness, while en route to a HOSPITAL EMERGENCY FACILITY.
7. Deflation Procedure:
- 7.1 Assess and record patient's vital signs.
 - 7.2 Slowly deflate the abdominal segment while monitoring the blood pressure to insure that the blood pressure continues to be greater than the age-related value for hypotension.
 - 7.3 After abdominal deflation is achieved, gradually deflate **both legs** while monitoring the blood pressure to insure that the blood pressure continues to be greater than the age-related value for hypotension.
8. Document the procedure (and attempts to perform the procedure) by completing the *RI EMS Ambulance Run Report*.

PREHOSPITAL STROKE SCALE

ASSESSMENT	NORMAL FINDING(S)	ABNORMAL FINDING(S)
<i>Facial Droop</i> (ask patient to smile or show teeth)	Both sides of the face move equally well.	One side of the face does not move as well as the other
<i>Arm Drift</i> (ask the patient to close eyes and hold arms straight out for 10 seconds)	Both arms move the same or both arms do not move at all.	One arm does not move or one arm drifts down.
<i>Speech</i> (ask the patient to say "you can't teach an old dog new tricks")	Patient uses correct words with no slurring.	Patient slurs words, uses the wrong words, or is unable to speak.
<i>Vision</i> (ask the patient to read your name tag with one eye at a time)	Patient is able to read equally well with both eyes.	Patient is unable to read with one eye or it is blurry.
<i>Coordination</i> (ask the patient to place their index finger from their nose to the examiners finger, held at a distance of 12-18". Test one side, then the other)	Patient is able to complete the task as indicated	Patient is unable to complete the task as indicated.

Note: Abnormality in any one assessment area is strongly suggestive of stroke.

Some patients with stroke symptoms may benefit from medications administered at the hospital within a few hours of symptom onset.

Recognition:

Unilateral paralysis:	Weakness, clumsiness or heaviness, usually involving one side of the body.
Unilateral numbness:	Sensory loss, tingling or abnormal sensation, usually involving one side of the body.
Language Disturbance:	Trouble understanding or speaking (aphasia) or slurred speech (dysarthria).
Monocular blindness:	Painless visual loss in one eye often described as a curtain dropping.
Vertigo:	Sense of spinning or whirling that persists at rest.
Ataxia:	Poor balance, stumbling gait, staggering, or incoordination of one side of the body.

Telephone Reference

AIR AMBULANCE (Helicopter)

Air Ambulance Service	Telephone
Life Flight UMASS-Memorial (Worcester, Palmer, Massachusetts)	1-800-343-4354
Life Star (Hartford, Norwich, Connecticut)	1-800-221-2569
Med Flight (Burlington, Plymouth, Massachusetts)	1-800-233-8998

HOSPITAL EMERGENCY DEPARTMENTS

HOSPITAL	NOTIFICATION	MEDICAL CONTROL
Butler Hospital	401 455-6215	– N/A –
Hasbro Children's Hospital	401 444-6874	401 444-6874
Kent County Memorial Hospital	401 736-4288	401 737-3320
Landmark Medical Center- Woonsocket	401 769-1125	401 762-1177
Memorial Hospital	401 729-2191	401 729-2191
Miriam Hospital	401 793-3000	401 793-3000
Newport Hospital	401 845-1120	401 845-1211
Rhode Island Hospital	401 444-4220	401 444-5731
Roger Williams Medical Center	401 456-2121	401 456-2132
St. Joseph's Hospital - Fatima Unit	401 456-3418	401 456-3402
South County Hospital	401 782-8010	401 792-3883
Veteran's Administration Hospital	401 457-3050	401 457-3050
Westerly Hospital	401 348-3325	401 348-3325
Women & Infants' Hospital	401 453-7605	401 453-7605

OTHER AGENCIES

Diver's Alert Network (D•A•N)	919 684-8111
Regional Center for Poison Control & Prevention (Boston)	1-800-682-9211
Rape Crisis Center	401 421-4100 (24 hours)
Rhode Island Critical Incident Stress Management Team	401 763-2778 (Pager)
Rhode Island Department of Health	401 222-2231
<i>Division of Emergency Medical Services</i>	401 222-2401 (8:30 – 4:30)
<i>After hours, weekends, and holidays</i>	401 272-5952
Rhode Island Medical Examiner's Office	401 222-5500 (8:30 – 4:30)
<i>After hours, weekends, and holidays</i>	401 222-2948
Rhode Island State Police	401 444-1111 (24 hours)
US Naval Hospital - Newport	401 841-3111
US Coast Guard (Castle Hill)	401 846-3684

Revised Trauma Score (Adult)

Component	Method	Values	Score											
Respiratory Rate	Count respirations in 15 seconds, then multiply by 4.	10-24 =	4											
		25-35 =	3											
		≥36 =	2											
		1-9 =	1											
		none =	0											
Systolic Blood Pressure	Measure systolic BP with stethoscope or by palpation.	≥90 =	4											
		70-89 =	3											
		50-69 =	2											
		1-49 =	1											
		no pulse =	0											
Glasgow Coma Scale Obtain sub-scores for each assessment (Eyes, Verbal, Motor). Total these sub-scores, then convert the sum as indicated.	EYES													
	4	Eyes open spontaneously during initial assessment.												
	3	Eyes open to verbal command or speech.												
	2	Eyes open only to painful stimulus .												
	1	Eyes do not open during initial evaluation period.												
	VERBAL													
	5	Patient is oriented to person, place, time; converses.												
	4	Patient converses, but is disoriented or confused .												
	3	Patient is disoriented ; speech clear, but inappropriate.												
	2	Speech is garbled . Includes grunting or moaning.												
1	No verbal responses to any stimulation.													
MOTOR														
6	Obeys verbal commands by moving extremities or facial muscles (if C-spine injuries).													
5	Can localize a painful stimulus by moving an extremity to an injured area in a purposeful manner.													
4	Withdraws an extremity from painful stimulus, but unable to localize/prevent recurring pain.													
3	Abnormal flexor response to painful stimulus, ie: decorticate (flexion) posturing.													
2	Abnormal extensor response to painful stimulus, ie: decerebrate (extension) posturing.													
1	No response , no motion to any painful stimulus.													
Sum of three sections (EYES + VERBAL + MOTOR) →														
Conversion	<table style="display: inline-table; vertical-align: middle;"> <tr> <td><i>Sum</i></td><td><i>Conversion</i></td></tr> <tr> <td>13-15</td><td>= 4</td></tr> <tr> <td>9-12</td><td>= 3</td></tr> <tr> <td>6-8</td><td>= 2</td></tr> <tr> <td>4-5</td><td>= 1</td></tr> <tr> <td><4</td><td>= 0</td></tr> </table>	<i>Sum</i>	<i>Conversion</i>	13-15	= 4	9-12	= 3	6-8	= 2	4-5	= 1	<4	= 0	
<i>Sum</i>	<i>Conversion</i>													
13-15	= 4													
9-12	= 3													
6-8	= 2													
4-5	= 1													
<4	= 0													
Converted Score →														
Revised Trauma Score: →														
Sum of RR + BP + converted Glasgow Coma scores														



Trauma Score (Pediatric)

Component	+2 points	+ 1 point	- 1 point	Score
<i>Weight</i>	>20 kg	10–20 kg	<10 kg	
<i>Airway</i>	open/no assist	assist needed	intubated	
<i>Systolic BP</i>	>90 mm Hg (+ radial pulse)	50–90 mm Hg (+ femoral/carotid)	<50 mm Hg (no palpable pulse)	
<i>Consciousness</i>	awake, alert	obtunded	unresponsive	
<i>Fractures</i>	none	closed fracture	multiple or open	
<i>Wounds</i>	none	minor wounds	major/penetrating	
TOTAL:				

The Rhode Island Department of Health, Division of Emergency Medical Services, gratefully acknowledges the contributions of the Rhode Island Ambulance Service Advisory Board, and many others who participated in the process of revising and producing these protocols and standing orders. Special appreciation is extended to those listed below.

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Supported in part by project MCH# 444001-01-0 from the Emergency Medical Services for Children program (Section 1910 of the US Public Health Service Act), Health Resources and Services Administration, Department of Health and Human Services.